LAMPIRAN A

PROGRAM INVERS AKUSTIK 3 DIMENSI

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C***************************************************************
C**              INVERSE ACOUSTIC THREE DIMENSION             **]
C**              MAXIMUM NUMBER OF NODE (NMAX) = 150          **]
C**              MAXIMUM NUMBER OF ELEMEN (MMAX) = 69         **]
C***************************************************************
C- ONE DIMENSION
      DIMENSION NIT(14),BTN(150),FPP(200),PFP(200),PHI(150),DPHI(150),
     1          EPHI(160),EPHIF(200)
C- TWO DIMENSION
      DIMENSION X(3,150),XCP(3,10),XFP(3,200),NODE(8,69),E1(8,112),
     1     E2(8,112),WFPNQQ(8,144),WFPNQT(8,112),A(160,150),B(160,150),
     2     C(200,150),D(200,150),AIB(300,300),AP(300,320)
C- THREE DIMENSION
      DIMENSION SHPQ(8,8,144),SHPQ1(8,8,144),SHPQ2(8,8,144),
     1          SHPT(8,8,112),SHPT1(8,8,112),SHPT2(8,8,112),
     2          WFPQQ(8,3,100),WFPQT(8,2,100)
C- FOUR DIMENSION
      DIMENSION SHAPQ(8,3,8,100),SHAPQ1(8,3,8,100),SHAPQ2(8,3,8,100),
     1          SHAPT(8,2,8,100),SHAPT1(8,2,8,100),SHAPT2(8,2,8,100)
C-
      INTEGER*2 NDSKP(69,150),NDSKPC(69,10),NDSKPF(69,200),NDSS(2,69),
     1          KKK(8,69),KKMAX(6)
      INTEGER PSYM
      COMPLEX A,B,BTN,C,D,PFP,FPP,EPHI,EPHIF,PHI,DPHI
      COMMON/OMEGA/WN
      COMMON/MAT/EPS,SVDQ,MSVD
      COMMON/IDEN/IDD
      COMMON/SYM/PSYM
      COMMON/SCAT/ISC,AF,BE,GA
      COMMON/CGAUS/Y(12,12),W(12,12),NGTHET,NGRHO
C=================================================================
C     MAIN PROGRAM
C=================================================================
      NMAX = 150
      MMAX = 69
      OPEN (5,FILE='INPUT.TXT',STATUS='OLD')
      OPEN (6,FILE='AKHIR.TXT',STATUS='NEW')
C--
cc input : nmax,mmax
cc output: N,M,X,NODE,XCP,XFP,NCP,NFP,FPP,NPCH,ISEVCP dan ISEVFP
      CALL INPDAT (NMAX,N,MMAX,M,X,NODE,XCP,XFP,NCP,NFP,FPP,
     1            NPCH,ISEVCP,ISEVFP)
C--
cc input nggak ada
cc output Y(12,12) dan W(12,12)
C--
      CALL GAUS (Y,W)
C--
cc input : nggak ada
cc output: E1(8,112),E2(8,112),WFPNQT(8,112),NIT(14)
C--
      CALL FAIR(E1,E2,WFPNQT,NIT)
C--
cc input : M,N,NCP,NFP,NODE,X,XCP,XFP,ISEVCP dan ISEVFP
cc output: NDSKP,NDSKPC,NDSKPF,NDSS,KKK dan KKMAX
C--
      CALL DEGSEV (M,N,NCP,NFP,NDSKP,NDSKPC,NDSKPF,NDSS,NODE,KKK,
     1     KKMAX,X,XCP,XFP,ISEVCP,ISEVFP)
C--
cc input : NIT(14),E1,E2
cc output: SHPQ,SHPQ1,SHPQ2,SHPT,SHPT1,SHPT2,WFPNQQ
C--
              CALL CHAPE(SHPQ,SHPQ1,SHPQ2,SHPT,SHPT1,SHPT2,NIT,E1,E2,WFPNQQ)
C--
cc input : N,NPCH,M,X,XCP,XFP,NCP,NFP,NODE,SHPQ,SHPQ1,SHPQ2,
cc         SHPT,SHPT1,SHPT2,WFPNQQ,NIT,SHAPQ,SHAPQ1,SHAPQ2,
cc         SHAPT,SHAPT1,SHAPT2,WFPQQ,WFPQT,WFPNQT,NDSKP,
cc         NDSKPC,NDSKPF,KKK,KKMAX,FPP,EPHI,EPHIF
cc output: A,B,BTN,C,D,PFP
C--
      CALL COEF(N,NPCH,M,A,B,BTN,C,D,PFP,X,XCP,XFP,NCP,NFP,NODE,SHPQ,
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     1        SHPQ1,SHPQ2,SHPT,SHPT1,SHPT2,NIT,SHAPQ,SHAPQ1,SHAPQ2,
     2        SHAPT,SHAPT1,SHAPT2,WFPQQ,WFPQT,WFPNQQ,WFPNQT,NDSKP,
     3        NDSKPC,NDSKPF,KKK,KKMAX,FPP,EPHI,EPHIF)
C--
      NPCT2 = NPCH * 2
      NFPT2 = NFP * 2
      NT2 = N * 2
C--
cc input : N,NPCH,NFPT2,NPCT2,NT2,A,B,BTN,C,D,PFP
cc output: PHI,DPHI,AIB,AP
C--
      CALL SOLVE (A,B,BTN,C,D,PFP,NFP,NPCH,N,NFPT2,NPCT2,NT2,
     1           PHI,DPHI,AIB,AP)
C--
      END
C=======================================================================
      SUBROUTINE INPDAT (NMAX,N,MMAX,M,X,NODE,XCP,XFP,NCP,NFP,FPP,
     1                   NPCH,ISEVCP,ISEVFP)
C=======================================================================
C-----
C-- TO READ AND OUTPUT THE DATA INPUT FILE
C-----
C- ONE DIMENSION
      DIMENSION XD(3),NODER(8),FPP(200)
C- TWO DIMENSION
      DIMENSION X(3,NMAX),XCP(3,10),XFP(3,200),NODE(8,MMAX)
      CHARACTER*4 DATMOD
      CHARACTER*40 TITLE
      INTEGER PSYM
      COMPLEX FPP
      COMMON/OMEGA/WN
      COMMON/MAT/EPS,SVDQ,MSVD
      COMMON/IDEN/IDD
      COMMON/SYM/PSYM
      COMMON/SCAT/ISC,AF,BE,GA
      WRITE (6,50)
   50 FORMAT (/72(1H=)/12X,'I N P U T   D A T A   F I L E',/
     1        72(1H=))
  100 READ (5,110) DATMOD
  110 FORMAT (A4,15X)
      IF (DATMOD.EQ.'TITL') GO TO 1000
      IF (DATMOD.EQ.'EXTE'.OR.DATMOD.EQ.'INTE') GO TO 1100
      IF (DATMOD.EQ.'PLAN'.OR.DATMOD.EQ.'POIN') GO TO 1200
      IF (DATMOD.EQ.'PARA') GO TO 1250
      IF (DATMOD.EQ.'FREQ') GO TO 1300
      IF (DATMOD.EQ.'PROP') GO TO 1400
      IF (DATMOD.EQ.'NODE') GO TO 1500
C     IF (DATMOD.EQ.'TRUE') GO TO 1600
      IF (DATMOD.EQ.'ELEM') GO TO 1700
      IF (DATMOD.EQ.'CHIE') GO TO 1800
      IF (DATMOD.EQ.'FIEL') GO TO 1900
      IF (DATMOD.EQ.'END') GO TO 2000
C-----
C- READ TITLE
C-----
 1000 READ (5,1010) TITLE
 1010 FORMAT (A40)
      WRITE (6,1020) TITLE
 1020 FORMAT (//2X,10(1H-),' TITLE ',10(1H-)/2X,A40)
      GO TO 100
C-----
C- IDENTIFY THE PROBLEM
C-----
 1100 ISC = 0
      PSYM = 0
      IF (DATMOD.EQ.'INTE') GO TO 1120
      WRITE (6,1110)
 1110 FORMAT (//2X,'***** EXTERIOR PROBLEM *****')
      GO TO 1140
 1120 WRITE (6,1130)
 1130 FORMAT (//2X,'***** INTERIOR PROBLEM *****')
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 1140 IF (PSYM.EQ.0) GO TO 1180
      IF (PSYM.GT.0.AND.PSYM.LE.3) GO TO 1160
      WRITE (6,1150)
 1150 FORMAT (//2X,'!!!!! ERROR --- PSYM > 3 !!!!!',/2X)
      STOP
 1160 WRITE (6,1170) PSYM
 1170 FORMAT (2X,'USING SIMETRY',/2X,
     1     'PLANE OF SIMETRY PERPENDICULAR TO X(',I1,') AXIS')
 1180 GO TO 100
C-----
C- SPECIFY THE INCIDENT WAVE IN SCATTERING PROBLEM
C- ISC = 1 : PLANE WAVE; AF,BE,GA : THE DIRECTION COSINES
C- ISC = 2 : SPHERICAL WAVE; AF,BE,GA : LOCATION OF THE POINT SOURCE
C-----
 1200 ISC = 1
      IF (DATMOD.EQ.'POIN') ISC = 2
      READ (5,*) AF,BE,GA
      GO TO 100
C------
C-- TO READ PARAMETER
C-----
 1250 READ (5,*) EPS,SVDQ,MSVD
      GO TO 100
C-----
C- PRESCRIBE   THE FREQUENCY RANGE
C-----
 1300 READ (5,*) F,IDD
      IF (IDD.EQ.1) GO TO 1340
      IF (ISC.EQ.1.OR.ISC.EQ.2) GO TO 1320
      WRITE (6,1310)
 1310 FORMAT (/2X'***** RADIATION PROBLEM *****')
      GO TO 1340
 1320 WRITE (6,1330)
 1330 FORMAT (/2X'***** SCATTERING PROBLEM *****')
 1340 WRITE (6,1350) F
 1350 FORMAT (/2X,'FREQUENCY         : ',F10.4)
      GO TO 100
C-----
C- SPECIFY THE PROPERTY OF AIR
C-----
 1400 READ (5,*) SPEED, DENS, PREF
      WRITE (6,1410) SPEED
 1410 FORMAT (2X,'SPEED OF SOUND    : ',F10.4)
      PI = 3.141593
      WN = 2 * PI * F / SPEED
      WRITE (6,1420) WN
 1420 FORMAT (2X,'WAVE NUMBER       : ',F10.5)
      WRITE (6,1430) DENS
 1430 FORMAT (2X,'DENSITY           : ',F10.4)
      WRITE (6,1440) PREF
 1440 FORMAT (2X,'REFERENCE PRESSURE: ',F10.5)
      GO TO 100
C-----
C- READ THE NODAL COORDINATES
C-----
 1500 WRITE (6,1510)
 1510 FORMAT (//2X,10(1H-),' NODAL COORDINATES ',10(1H-),
     1       //2X,'NODE',7X,'X(1)',9X,'X(2)',9X,'X(3)')
      I = 0
 1520 I = I + 1
      READ (5,*) IN, (XD(J),J=1,3)
      IF (IN.EQ.0) GO TO 1560
      IF (IN.LE.NMAX.AND.IN.EQ.I) GO TO 1540
      WRITE (6,1530) I,IN
 1530 FORMAT (//12X,'!!!!! E R R O R !!!!!',/3X,'NODE NUMBER (',
     1       I3,') IMPROPERLY S[ECIFIED (',I3,')')
      STOP
 1540 X(1,IN) = XD(1)
      RMAX = 0
      R = ABS(X(1,IN))
      IF (R.GT.RMAX) RMAX = R
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      X(2,IN) = XD(2)
      RMAX = 0
      R = ABS(X(2,IN))
      IF (R.GT.RMAX) RMAX = R
      X(3,IN) = XD(3)
      RMAX = 0
      R = ABS(X(3,IN))
      IF (R.GT.RMAX) RMAX = R
 1550 GO TO 1520
      RRMAX = 1./RMAX
 1560 N = I - 1
      DO 1590 IN = 1,N
      DO 1570 J = 1,3
      IF (ABS(X(J,IN))/RMAX.LT.1.E-4) X(J,IN) = 0
 1570 CONTINUE
      WRITE (6,1580) IN, (X(J,IN),J=1,3)
 1580 FORMAT (3X,I3,1X,3(3X,F10.5))
 1590 CONTINUE
      GO TO 100
C-----
C- READ TRUE VALUES OF NODAL PHI AND DPHI
C-----
C-
C-
C-----
C- READ THE ELEMENT DATA
C-----
 1700 WRITE (6,1710)
 1710 FORMAT (//2X,10(1H-),' ELEMENT DATA  ',10(1H-),//2X/
     1   'ELEMENT',3X,'NODE1',2X,'NODE2',2X,'NODE3',2X,
     2   'NODE4',2X,'NODE5',2X,'NODE6',2X,'NODE7',2X,'NODE8')
      J = 0
 1720 J = J + 1
      READ (5,*) K, (NODER(I),I=1,8)
      IF(K.EQ.0) GO TO 1750
      IF(K.LE.MMAX.AND.K.EQ.J) GO TO 1740
      WRITE (6,1730) J,K
 1730 FORMAT (//12X,'!!!!! E R R O R !!!!!',/3X,
     1 'ELEMENT NUMBER (',I3,') IMPROPERLY SPECIFIED (',I3,')')
      STOP
 1740 NODE(1,K) = NODER(1)
      NODE(2,K) = NODER(2)
      NODE(3,K) = NODER(3)
      NODE(4,K) = NODER(4)
      NODE(5,K) = NODER(5)
      NODE(6,K) = NODER(6)
      NODE(7,K) = NODER(7)
      NODE(8,K) = NODER(8)
 1745 GO TO 1720
 1750 M = J - 1
      DO 1790 K = 1,M
      DO 1770 I = 1,8
      IF (NODE(I,K).GT.0.AND.NODE(I,K).LE.N) GO TO 1770
      WRITE (6,1760) I,K,NODE(I,K)
 1760 FORMAT (//12X,'!!!!! E R R O R !!!!!',/3X,
     1 'NODE(',I1,',',I3,') IMPROPERLY SPECIFIED  : ',I5)
      STOP
 1770 CONTINUE
      WRITE (6,1780) K, (NODE(I,K),I=1,8)
 1780 FORMAT (4X,I3,1X,8(4X,I3))
 1790 CONTINUE
      GO TO 100
C-----
C- READ THE CHIEF POINT COORDINATES
C-----
 1800 WRITE (6,1810)
 1810 FORMAT (//2X,10(1H-),' CHIEF POINT ',10(1H-),//2X,'POINT',
     1  6X,'X(1)',9X,'X(2)',9X,'X(3)')
      NCMAX = 10
      I = 0
 1820 I = I + 1
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      READ (5,*) IC,(XD(J),J=1,3)
      IF (IC.EQ.0) GO TO 1860
      IF (IC.LE.NCMAX.AND.IC.EQ.I) GO TO 1840
      WRITE (6,1830) I,IC
 1830 FORMAT (//12X,'!!!!! E R R O R !!!!!',/3X,'CHIEF POINT',
     1  ' NUMBER (',I3,') IMPROPERLY SPECIFIED (',I3,')')
      STOP
 1840 XCP(1,IC) = XD(1)
      XCP(2,IC) = XD(2)
      XCP(3,IC) = XD(3)
 1850 GO TO 1820
 1860 NCP = I - 1
      ISEVCP = XD(1)
      DO 1880 IC = 1,NCP
      WRITE (6,1870) IC,(XCP(J,IC),J=1,3)
 1870 FORMAT(3X,I3,1X,3(3X,F10.5))
 1880 CONTINUE
      IF (ISEVCP.EQ.0) GO TO 1894
      IF (ISEVCP.GT.0.AND.ISEVCP.LE.8) GO TO 1890
      WRITE (6,1882) ISEVCP
 1882 FORMAT(//12X,'!!!!! E R R O R !!!!!',/3X,'IMPROPER DEGREE',
     1       ' OF SEVERITY SPECIFIED FOR CHIEF POINT  : ',I2)
      STOP
 1890 WRITE (6,1892) ISEVCP
 1892 FORMAT(/2X,'USING NUMBER OF SEVERITY : ',I2,
     1       ' FOR ALL CHIEF POINT')
 1894 GO TO 100
C-----
C- READ THE FIELD POINT COORDINATES AND THE KNOWN PRESSURE
C-----
 1900 NPCH = N + NCP
      WRITE (6,1910)
 1910 FORMAT (//2X,10(1H-),' FIELD POINT ',10(1H-),//63X,'PRESSURE',
     1        /2X,'POINT',9X,'X(1)',10X,'X(2)',10X,'X(3)',10X,'REAL',
     2        7X,'IMAGINER')
      NFMAX = 200
      I = 0
 1920 I = I + 1
      READ (5,*) IF,(XD(J),J=1,3),PRE,PIM
      IF (IF.EQ.0) GO TO 1960
      IF (IF.LE.NFMAX.AND.IF.EQ.I) GO TO 1940
      WRITE (6,1930) I,IF
 1930 FORMAT (//12X,'!!!!! E R R O R !!!!!',/3X,'FIELD POINT',
     1  ' NUMBER (',I3,') IMPROPERLY SPECIFIED (',I3,')')
      STOP
 1940 XFP(1,IF) = XD(1)
      XFP(2,IF) = XD(2)
      XFP(3,IF) = XD(3)
 1950 FPP(IF) = CMPLX(PRE,PIM)
      GO TO 1920
 1960 NFP = I - 1
      ISEVFP = XD(1)
      DO 1980 IF = 1,NFP
      WRITE (6,1970) IF, (XFP(J,IF),J=1,3), FPP(IF)
 1970 FORMAT (3X,I3,1X,5(3X,F11.5))
 1980 CONTINUE
      IF (ISEVFP.EQ.0) GO TO 1994
      IF (ISEVFP.GT.0.AND.ISEVFP.LE.8) GO TO 1990
      WRITE (6,1982) ISEVFP
 1982 FORMAT (//12X,'!!!!! E R R O R !!!!!',/3X,'IMPROPER DEGREE',
     1        ' OF SEVERITY SPECIFIED FOR FIELD POINT : ',I2)
      STOP
 1990 WRITE (6,1992) ISEVFP
 1992 FORMAT(/2X,'USING DEGREE OF SEVERITY : ',I2,
     1       ' FOR ALL FIELD POINT')
 1994 IF (NFP.GE.N) GO TO 1998
      WRITE (6,1997)
 1997 FORMAT (//2X,'!!!!! ERROR --- ',
     1        ' TOO SEDIKIT FIELD POINT SPECIFIED !!!!!',/2X)
      STOP
 1998 GO TO 100
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C-----
C- BACK TO MAIN PROGRAM
C-----
 2000 WRITE (6,2010)
 2010 FORMAT (/72(1H=)/12X,'END OF INPUT DATA FILE',/
     1       72(1H=))
      RETURN
      END
C=======================================================================
      SUBROUTINE GAUS (Y,W)
C=======================================================================
C-----
C-- TO READ THE GAUSSIAN QUADRATURE INTEGRATION POINT &
C-- THE WEIGHTING FUNCTION.
C-----
      DIMENSION Y(12,12),W(12,12)
      Y(2,1) = -.5773503
      Y(2,2) = -Y(2,1)
      W(2,1) = .5
      W(2,2) = .5
      Y(3,1) = W(2,1)
      Y(3,2) = 0
      Y(3,3) = -Y(3,1)
      W(3,1) = .55555556/2
      W(3,2) = .88888889/2
      W(3,3) = W(3,1)
      Y(4,1) = -.8611363
      Y(4,2) = -.3399810
      Y(4,3) = -Y(4,2)
      Y(4,4) = -Y(4,1)
      W(4,1) = .1739274
      W(4,2) = .3260726
      W(4,3) = W(4,2)
      W(4,4) = W(4,1)
      Y(5,1) = -.9061798
      Y(5,2) = -.5384693
      Y(5,3) = 0
      Y(5,4) = -Y(5,2)
      Y(5,5) = -Y(5,1)
      W(5,1) = .1184634
      W(5,2) = .2393143
      W(5,3) = .2844444
      W(5,4) = W(5,2)
      W(5,5) = W(5,1)
      Y(6,1) = -.9324695
      Y(6,2) = -.6612094
      Y(6,3) = -.2386192
      Y(6,4) = -Y(6,3)
      Y(6,5) = -Y(6,2)
      Y(6,6) = -Y(6,1)
      W(6,1) = .17132449/2
      W(6,2) = .36076157/2
      W(6,3) = .46791393/2
      W(6,4) = W(6,3)
      W(6,5) = W(6,2)
      W(6,6) = W(6,1)
      Y(8,1) = 0.5*(Y(4,1) - 1.0)
      Y(8,2) = 0.5*(Y(4,2) - 1.0)
      Y(8,3) = 0.5*(Y(4,3) - 1.0)
      Y(8,4) = 0.5*(Y(4,4) - 1.0)
      Y(8,5) = -Y(8,4)
      Y(8,6) = -Y(8,3)
      Y(8,7) = -Y(8,2)
      Y(8,8) = -Y(8,1)
      W(8,1) = W(4,1)*0.5
      W(8,2) = W(4,2)*0.5
      W(8,3) = W(4,3)*0.5
      W(8,4) = W(4,4)*0.5
      W(8,5) = W(8,4)
      W(8,6) = W(8,3)
      W(8,7) = W(8,2)
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      W(8,8) = W(8,1)
      Y(10,1) = 0.5*(Y(5,1) - 1.0)
      Y(10,2) = 0.5*(Y(5,2) - 1.0)
      Y(10,3) = 0.5*(Y(5,3) - 1.0)
      Y(10,4) = 0.5*(Y(5,4) - 1.0)
      Y(10,5) = 0.5*(Y(5,5) - 1.0)
      Y(10,6) = -Y(10,5)
      Y(10,7) = -Y(10,4)
      Y(10,8) = -Y(10,3)
      Y(10,9) = -Y(10,2)
      Y(10,10) = -Y(10,1)
      W(10,1) = W(5,1)*0.5
      W(10,2) = W(5,2)*0.5
      W(10,3) = W(5,3)*0.5
      W(10,4) = W(5,4)*0.5
      W(10,5) = W(5,5)*0.5
      W(10,6) = W(10,5)
      W(10,7) = W(10,4)
      W(10,8) = W(10,3)
      W(10,9) = W(10,2)
      W(10,10) = W(10,1)
      Y(12,1) = 0.5*(Y(6,1) - 1.0)
      Y(12,2) = 0.5*(Y(6,2) - 1.0)
      Y(12,3) = 0.5*(Y(6,3) - 1.0)
      Y(12,4) = 0.5*(Y(6,4) - 1.0)
      Y(12,5) = 0.5*(Y(6,5) - 1.0)
      Y(12,6) = 0.5*(Y(6,6) - 1.0)
      Y(12,7) = -Y(12,6)
      Y(12,8) = -Y(12,5)
      Y(12,9) = -Y(12,4)
      Y(12,10) = -Y(12,3)
      Y(12,11) = -Y(12,2)
      Y(12,12) = -Y(12,1)
      W(12,1) = W(6,1)*0.5
      W(12,2) = W(6,2)*0.5
      W(12,3) = W(6,3)*0.5
      W(12,4) = W(6,4)*0.5
      W(12,5) = W(6,5)*0.5
      W(12,6) = W(6,6)*0.5
      W(12,7) = W(12,6)
      W(12,8) = W(12,5)
      W(12,9) = W(12,4)
      W(12,10) = W(12,3)
      W(12,11) = W(12,2)
      W(12,12) = W(12,1)
      RETURN
      END
C
C=====================================================================
      SUBROUTINE FAIR(E1,E2,WFPNQT,NIT)
C=====================================================================
C-----
C-- TO READ THE GAUSSIAN QUADRATURE INTEGRATION POINT &
C-- THE WEIGHTING FUNCTION FOR TRIANGULAR ELEMENT.
C-----
      DIMENSION E1(8,112),E2(8,112),WFPNQT(8,112),NIT(14)
C-----
     1 NIT(1)=0
     2 NIT(2)=0
     3 NIT(3)=0
     4 NIT(4)=6
      E1(1,1)=.9157621/10.
      E2(1,1)=E1(1,1)
      E1(1,2)=E1(1,1)
      E2(1,2)=.8168476
      E1(1,3)=E2(1,2)
      E2(1,3)=E1(1,1)
      E1(1,4)=.4459485
      E2(1,4)=E1(1,4)
      E1(1,5)=E1(1,4)
      E2(1,5)=.1081030
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   E1(1,6)=E2(1,5)
   E2(1,6)=E1(1,4)
   DO 41 IC=1,3
41 WFPNQT(1,IC)=.6348067/10
   DO 42 IC=4,6
42 WFPNQT(1,IC)=.1289694
 5 NIT(5)=7
   E1(2,1)=.3333333
   E2(2,1)=E1(2,1)
   E1(2,2)=.1012865
   E2(2,2)=E1(2,1)
   E1(2,3)=E1(2,2)
   E2(2,3)=.7974270
   E1(2,4)=E2(2,3)
   E2(2,4)=E1(2,2)
   E1(2,5)=.4701421
   E2(2,5)=E1(2,5)
   E1(2,6)=E1(2,5)
   E2(2,6)=.5971587/10.
   E1(2,7)=E2(2,6)
   E2(2,7)=E1(2,5)
   WFPNQT(2,1)=.1299038
   DO 51 IC=2,4
51 WFPNQT(2,IC)=.7271102/10.
   DO 52 IC=5,7
52 WFPNQT(2,IC)=.7643780/10.
 6 NIT(6)=0
 7 NIT(7)=0
 8 NIT(8)=16
   E1(3,1)=.3333333
   E2(3,1)=E1(3,1)
   E1(3,2)=.4592926
   E2(3,2)=E1(3,2)
   E1(3,3)=E1(3,2)
   E2(3,3)=.8141482/10.
   E1(3,4)=E2(3,3)
   E2(3,4)=E1(3,2)
   E1(3,5)=.5054723/10.
   E2(3,5)=E1(3,5)
   E1(3,6)=E1(3,5)
   E2(3,6)=.8989055
   E1(3,7)=E2(3,6)
   E2(3,7)=E1(3,5)
   E1(3,8)=.1705693
   E2(3,8)=E1(3,8)
   E1(3,9)=E1(3,8)
   E2(3,9)=.6588614
   E1(3,10)=E2(3,9)
   E2(3,10)=E1(3,8)
   E1(3,11)=.7284924
   E2(3,11)=.2631128
   E1(3,12)=E2(3,11)
   E2(3,12)=E1(3,11)
   E1(3,13)=.8394777/100.
   E2(3,13)=E2(3,11)
   E1(3,14)=E2(3,11)
   E2(3,14)=E1(3,13)
   E1(3,15)=E1(3,13)
   E2(3,15)=E1(3,11)
   E1(3,16)=E1(3,11)
   E2(3,16)=E1(3,13)
   WFPNQT(3,1)=.8332066/10.
   DO 81 IC=2,4
81 WFPNQT(3,IC)=.5490118/10.
   DO 82 IC=5,7
82 WFPNQT(3,IC)=.1873992/10.
   DO 83 IC=8,10
83 WFPNQT(3,IC)=.5959258/10.
   DO 84 IC=11,16
84 WFPNQT(3,IC)=.1572143/10
 9 NIT(9)=19
```

```
      E1(4,1)=.3333333
      E2(4,1)=.3333333
      E1(4,2)=.4896825
      E2(4,2)=.4896825
      E1(4,3)=.4896825
      E2(4,3)=.02063496
      E1(4,4)=.02063496
      E2(4,4)=E1(4,2)
      E1(4,5)=.4370896
      E2(4,5)=.4370896
      E1(4,6)=.4370896
      E2(4,6)=.1258208
      E1(4,7)=.1258208
      E2(4,7)=E1(4,5)
      E1(4,8)=.1882035
      E2(4,8)=.1882035
      E1(4,9)=.1882035
      E2(4,9)=.6235929
      E1(4,10)=E2(4,9)
      E2(4,10)=E1(4,9)
      E1(4,11)=.04472951
      E2(4,11)=.04472951
      E1(4,12)=.04472951
      E2(4,12)=.9105410
      E1(4,13)=.9105410
      E2(4,13)=E1(4,11)
      E1(4,14)=.7411986
      E2(4,14)=.2219630
      E1(4,15)=.2219630
      E2(4,15)=E1(4,14)
      E1(4,16)=.03683841
      E2(4,16)=E2(4,14)
      E1(4,17)=E2(4,14)
      E2(4,17)=E1(4,16)
      E1(4,18)=E1(4,16)
      E2(4,18)=E1(4,14)
      E1(4,19)=E1(4,14)
      E2(4,19)=E1(4,16)
      WFPNQT(4,1)=.05608138
      DO 91 IC=2,4
   91 WFPNQT(4,IC)=.01809110
      DO 92 IC=5,7
   92 WFPNQT(4,IC)=.04493375
      DO 93 IC=8,10
   93 WFPNQT(4,IC)=.04598464
      DO 94 IC=11,13
   94 WFPNQT(4,IC)=.01476728
      DO 95 IC=14,19
   95 WFPNQT(4,IC)=.02498976
      NIT(10)=0
   11 NIT(11)=28
      E1(5,1)=.3333333
      E2(5,1)=.3333333
      E1(5,2)=.02598914
      E2(5,2)=.02598914
      E1(5,3)=.02598914
      E2(5,3)=.9480217
      E1(5,4)=.9480217
      E2(5,4)=E1(5,2)
      E1(5,5)=.09428750
      E2(5,5)=.09428750
      E1(5,6)=.09428752
      E2(5,6)=.8114250
      E1(5,7)=.8114250
      E2(5,7)=E1(5,5)
      E1(5,8)=.4946368
      E2(5,8)=.4946368
      E1(5,9)=.4946368
      E2(5,9)=.0107264
      E1(5,10)=E2(5,9)
      E2(5,10)=E1(5,8)
```

```
      E1(5,11)=.2073434
      E2(5,11)=.2073434
      E1(5,12)=.2073434
      E2(5,12)=.5853132
      E1(5,13)=.5853132
      E2(5,13)=E1(5,11)
      E1(5,14)=.4389078
      E2(5,14)=.4389078
      E1(5,15)=.4389078
      E2(5,15)=.1221844
      E1(5,16)=.1221844
      E2(5,16)=E1(5,14)
      E1(5,17)=.8588703
      E2(5,17)=.1411297
      E1(5,18)=.1411297
      E2(5,18)=E1(5,17)
      E1(5,19)=0.0
      E2(5,19)=E2(5,17)
      E1(5,20)=E2(5,17)
      E2(5,20)=0.0
      E1(5,21)=0.0
      E2(5,21)=E1(5,17)
      E1(5,22)=E1(5,17)
      E2(5,22)=0.0
      E1(5,23)=.6779377
      E2(5,23)=.2772206
      E1(5,24)=.2772206
      E2(5,24)=E1(5,23)
      E1(5,25)=.04484168
      E2(5,25)=E2(5,23)
      E1(5,26)=E2(5,23)
      E2(5,26)=E1(5,25)
      E1(5,27)=E1(5,25)
      E2(5,27)=E1(5,23)
      E1(5,28)=E1(5,23)
      E2(5,28)=E1(5,25)
      WFPNQT(5,1)=.05079372
      DO 111 IC=2,4
  111 WFPNQT(5,IC)=.005048531
      DO 112 IC=5,7
  112 WFPNQT(5,IC)=.02198641
      DO 113 IC=8,10
  113 WFPNQT(5,IC)=.01088620
      DO 114 IC=11,13
  114 WFPNQT(5,IC)=.04166142
      DO 115 IC=14,16
  115 WFPNQT(5,IC)=.04002720
      DO 116 IC=17,22
  116 WFPNQT(5,IC)=.004250674
      DO 117 IC=23,28
  117 WFPNQT(5,IC)=.02370388
      NIT(12) = 64
      NIT(13) = 76
      NIT(14) = 112

            DO 155 IJ=6,8

            II = IJ - 3
      IF (IJ.EQ.6) IK=16
      IF (IJ.EQ.7) IK=19
      IF (IJ.EQ.8) IK=28

            DO 120 IL=1,IK
      E1(IJ,IL) = 0.5*E1(II,IL)
      E2(IJ,IL) = 0.5*E2(II,IL)
      WFPNQT(IJ,IL) = WFPNQT(II,IL)/4.0
      E1(IJ,IL) = 0.5*E1(II,IL)
      E2(IJ,IL) = 0.5*E2(II,IL)
      WFPNQT(IJ,IL) = WFPNQT(II,IL)/4.0
  120 CONTINUE
```

```
            IK1 = IK + 1
      IK2 = IK*2

            DO 130 IL=IK1,IK2
      JJ = IL - IK
      E1(IJ,IL) = 0.5*(1.0 + E1(II,JJ))
      E2(IJ,IL) = 0.5*E2(II,JJ)
      WFPNQT(IJ,IL) = WFPNQT(II,JJ)/4.0
  130 CONTINUE

            IK3 = IK2 + 1
      IK4 = IK2 + IK

            DO 140 IL=IK3,IK4
      JJ = IL - IK2
      E1(IJ,IL) = 0.5*E1(II,JJ)
      E2(IJ,IL) = 0.5*(1.0 + E2(II,JJ))
      WFPNQT(IJ,IL) = WFPNQT(II,JJ)/4.0
  140 CONTINUE

            IK5 = IK4 + 1
      IK6 = IK4 + IK

            DO 150 IL=IK5,IK6
      JJ = IL - IK4
      E1(IJ,IL) = 0.5*(1.0 - E1(II,JJ))
      E2(IJ,IL) = 0.5*(1.0 - E2(II,JJ))
      WFPNQT(IJ,IL) = WFPNQT(II,JJ)/4.0
  150 CONTINUE

  155 CONTINUE
      RETURN
      END
C=====================================================================
      SUBROUTINE DEGSEV (M,N,NCP,NFP,NDSKP,NDSKPC,NDSKPF,NDSS,NODE,KKK,
     1                KKMAX,X,XCP,XFP,ISEVCP,ISEVFP)
C=====================================================================
C-----
C-- TO DETERMINE THE DEGREE OF SEVERITY
C-- THIS VERSIION OF DSEV IS COMPATIBLE WITH THE VERSION OF NMDS WHICH
C-- USES THE NEW ALGORITHM FOR SEVERITY.
C-----
      DIMENSION NODE(8,M),X(3,N),XCP(3,NCP),XFP(3,NFP)
      INTEGER*2 NDSKP(M,N),NDSKPC(M,NCP),NDSKPF(M,NFP),NDSS(2,M),
     1         KKK(8,M),KKMAX(6)
C-----
C-- NDSKP(K,L)       DEGREE OF SEVERITY ON SEGMENT K WITH P AT NODE L
C-- NDSKPC(K,LC)  DEGREE OF SEVERITY ON SEGMENT K WITH P AT CHIEF
C--              POINT LC
C-- NDSKPF(K,LF)  DEGREE OF SEVERITY ON SEGMENT K WITH P AT FIELD
C--              POINT LF
C-- NDSS(2,K)     (IF NOT ZERO) DEGREE OF SEVERITY ON SEGMENT K
C--              FOR ALL P OF THE P.EQ.Q CASES
C-----
C--

      CALL NMDS (M,N,NCP,NFP,NDSKP,NDSKPC,NDSKPF,NDSS,X,XCP,XFP,
     1          ISEVCP,ISEVFP,NODE)
C--
      WRITE(6,1011)
 1011 FORMAT (//2X,10(1H-),' DEGREE OF SEVERITY ',10(1H-),//)
      WRITE(6,1021) (J,J=1,5)
 1021 FORMAT(16X,5(9X,I1))
      WRITE(6,1025)
 1025 FORMAT(16X,'12345678901234567890123456789012345678901234567890')
      WRITE(6,1030)
 1030 FORMAT (/2X,'ELEMENT',2X,'P=Q',10X,
     1       'P NODE NUMBER, P.NE.Q INTEGRATION',8X/)

            KK1 =0
      KK2 =0
```

```
      KK3 =0
      KK4 =0
      KK5 =0
      KK6 =0

      DO 90 K=1,M
      MDS =NDSS(2,K)
      MD = MDS - 2
      GO TO (5501,5502,5503,5504,5505,5506),MD
 5501 KK1 = KK1 + 1
      KKK(MDS,KK1) = K
      GO TO 53
 5502 KK2 = KK2 + 1
      KKK(MDS,KK2) = K
      GO TO 53
 5503 KK3 = KK3 + 1
      KKK(MDS,KK3) = K
      GO TO 53
 5504 KK4 = KK4 + 1
      KKK(MDS,KK4) = K
      GO TO 53
 5505 KK5 = KK5 + 1
      KKK(MDS,KK5) = K
      GO TO 53
 5506 KK6 = KK6 + 1
      KKK(MDS,KK6) = K
   53 CONTINUE
C-----
C-- PRINT DEGREES OF SEVERITY FOR NODAL POINT
C-----
      LN = INT (N/50)
      IF (LN.LT.1) GO TO 64
      DO 63 J = 1,LN
      IF (J.NE.1) GO TO 62
      WRITE (6,1040) K,MDS,(NDSKP(K,L),L=1,50)
 1040 FORMAT (4X,I3,5X,I1,3X,50I1)
      GO TO 63
   62 WRITE(6,1045) (NDSKP(K,L),L=(J-1)*50+1,J*50)
 1045 FORMAT(16X,50I1)
   63 CONTINUE
      IF ((N-LN*50).NE.0) WRITE(6,1045) (NDSKP(K,L),L=LN*50+1,N)
      GO TO 90
   64 WRITE(6,1040) K,MDS,(NDSKP(K,L),L=1,N)
   90 CONTINUE
C-----
C-- END OF K LOOP : ELEMENT LOOP
C-----
      KKMAX(1) = KK1
      KKMAX(2) = KK2
      KKMAX(3) = KK3
      KKMAX(4) = KK4
      KKMAX(5) = KK5
      KKMAX(6) = KK6
C-----
C-- PRINT DEGREES OF SEVERITY FOR CHIEF POINT
C-----
      IF (NCP.EQ.0.OR.ISEVCP.NE.0) GO TO 200
      WRITE (6,1050)
 1050 FORMAT(/31X,'P CHIEF POINT NUMBER',15X/)
      DO 190 K=1,M
      LNC = INT (NCP/50)
      IF (LNC.LT.1) GO TO 164
      DO 163 J = 1,LNC
      IF (J.NE.1) GO TO 162
      WRITE (6,1042) K,(NDSKPC(K,LC),LC=1,50)
 1042 FORMAT(4X,I3,9X,50I1)
      GO TO 163
  162 WRITE(6,1045) (NDSKPC(K,LC),LC=(J-1)*50+1,J*50)
c 1045 FORMAT(16X,50I1)
  163 CONTINUE
      IF((NCP-LNC*50).NE.0) WRITE(6,1045) (NDSKPC(K,LC),LC=LNC*50+1,NCP)
```

```
      GO TO 190
  164 WRITE(6,1042) K, (NDSKPC(K,LC),LC=1,NCP)
  190 CONTINUE
C-----
C-- 190 END OF K LOOP : ELEMENT LOOP
C-----
C
C-----
C-- PRINT DEGREES OF SEVERITY FOR FIELD POINT
C-----
  200 IF (ISEVFP.NE.0) GO TO 300
      WRITE (6,2050)
 2050 FORMAT(/31X,'P FIELD POINT NUMBER',15X/)
      DO 290 K = 1,M
      LNF = INT (NFP/50)
      IF (LNF.LT.1) GO TO 264
      DO 263 J = 1,LNF
      IF (J.NE.1) GO TO 262
      WRITE (6,1042) K,(NDSKPF(K,LF),LF=1,50)
C1042 FORMAT (4X,I3,9X,50I1)
      GO TO 263
  262 WRITE(6,1045) (NDSKPF(K,LF),LF=(J-1)*50+1,J*50)
C1045 FORMAT(16X,50I1)
  263 CONTINUE
      IF((NFP-LNF*50).NE.0) WRITE(6,1045) (NDSKPF(K,LF),LF=LNF*50+1,NFP)
      GO TO 290
  264 WRITE (6,1042) K,(NDSKPF(K,LF),LF=1,NFP)
  290 CONTINUE
C-----
C-- 290 END OF K LOOP : ELEMENT LOOP
C-----
  300 WRITE (6,1060)
 1060 FORMAT (2X)
      WRITE (6,1025)
            WRITE(6,1021) (J,J=1,5)
      RETURN
      END


C==1=================================================================
      SUBROUTINE NMDS (M,N,NCP,NFP,NDSKP,NDSKPC,NDSKPF,NDSS,X,XCP,XFP,
     1               ISEVCP,ISEVFP,NODE)
C=====================================================================
C-----
C-- TO SPECIFY DEGREES OF SEVERITY FOR EACH SEGMENT
C-- USES NEW ALGORITHM : SEV = (3.35 + 0.6*COS(THETA))*(L/D)
C-----
      DIMENSION NODE(8,M),SMP(3),V1(3),V2(3),SMP1(3),SMP2(3),
     1         SNOR(3),D(3),PQD(8),X(3,N),XCP(3,NCP),XFP(3,NFP)
      INTEGER NSEV
            REAL LAMDA
            INTEGER*2 NDSKP(M,N),NDSKPC(M,NCP),NDSKPF(M,NFP),NDSS(2,M)
      COMMON/OMEGA/WN
      COMMON/NGTR/NGRH(8,2,2),NGTH(8,2,2)
      PI = 3.141593
      LAMDA = 2.0*PI/WN

C-----
C-- MODIFICATIONS TO ALLOW DIFFERENT VALUES OF NGRHO AND NGTHET
C-- KQT = 1 -- QUADRILATERAL ELEMENT; KQT = 2 -- TRIANGULAR ELEMENT
C-- KLN = 1 -- CORNER NODE; KLN = 2 -- MIDSIDE NODE
C-----
C
C-----
C-- KSS LOOP : TO GIVE THE VALUES OF NGRHO & NGTHET FOR DEGREE
C--           OF SEVERITY -- KSS, FROM 3 TO 8
C-----
      DO 69 KSS = 3,8
      IF (KSS.LE.5) KSS1=KSS+1
      IF (KSS.GT.5) KSS1=KSS1+2
      KSS2 = KSS - 1
```

```
      IF (KSS.EQ.3.OR.KSS.EQ.8) KSS2=KSS
      KSS3 = KSS
      IF (KSS.GT.6.) KSS3=KSS2+2
      DO 69 KQT=1,2
      DO 69 KLN=1,2
      IF (KLN.EQ.2) GO TO 35
      NGRHO = KSS1
      NGTHET = KSS2
      GO TO 36
   35 IF (KQT.EQ.1) GO TO 37
      NGRHO = KSS2
      NGTHET = KSS1
      GO TO 36
   37 NGRHO = KSS3
      NGTHET = KSS3
   36 IF (NGRHO.LT.4) NGRHO=4
      IF (NGTHET.LT.4) NGTHET=4
      NGRH(KSS,KQT,KLN) = NGRHO
      NGTH(KSS,KQT,KLN) = NGTHET
   69 CONTINUE
C-----
C-- END OF KSS LOOP
C-----
      NDMAX = 0
      DO 300 K=1,M
      NLN = 8
      IF(NODE(2,K).EQ.NODE(3,K)) NLN=6
C-----
C-- DETERMINE THE SEGMENT MID POINT, ITS SLOPE IN DIRECTION 1 AND 2, AND
C-- THEN CROSS MULTIPY THE TWO SLOPE VECTORS TO OBTAIN THE NORMAL.
C-----
      DO 40 I=1,3
      SMP1(I)=0.
      SMP2(I)=0.
      DO 30 J=1,4
      SMP1(I)=SMP1(I)+X(I,NODE(J,K))
      SMP2(I)=SMP2(I)+X(I,NODE(J+4,K))
   30 CONTINUE
      SMP(I)= -0.25 * SMP1(I) + 0.5 * SMP2(I)
      V1(I)=(X(I,NODE(5,K))-X(I,NODE(7,K)))/2.
      V2(I)=(X(I,NODE(6,K))-X(I,NODE(8,K)))/2.
   40 CONTINUE
C-----
C-- SMP IS THE SEGMENT MID POINT
C-- V1 AND V2 ARE THE SLOPES IN RESPECTIVE DIRECTIONS
C-----
      SNOR(1)=V1(2)*V2(3)-V1(3)*V2(2)
      SNOR(2)=V1(3)*V2(1)-V1(1)*V2(3)
      SNOR(3)=V1(1)*V2(2)-V1(2)*V2(1)
      ABSN=(SNOR(1)**2+SNOR(2)**2+SNOR(3)**2)**0.5
C-----
C-- SNOR ARE THE COMPONENT OF NORMAL VECTOR.
C-- DETERMINE THE LONGEST DIAGONAL.
C-----
      IK = 2
      IF (NLN.EQ.6) IK=3
      B2M=0.
      DO 60 J=1,IK
      II = J + 2
      JJ = J
      IF(J.NE.3) GO TO 45
      II = 4
      JJ = 1
   45 B2=0.
      DO 50 I=1,3
      NODII = NODE(II,K)
      NODJJ = NODE(JJ,K)
   50 B2=B2+(X(I,NODII)-X(I,NODJJ))**2
      IF(B2.GT.B2M) B2M=B2
   60 CONTINUE
      BM = SQRT(B2M)
```

```
      BMAX=BM*0.7071
C-----
C-- DETERMINE THE SEVERITY FOR THE P.EQ.Q PART OF THE CALCULATIONS
C-- NOTE THAT THE LEAST NUMBER OF SEVERITY IS 3
C-----
      RATIO = BM/LAMDA
      IF (RATIO.GE.3.0) GO TO 65
      IF (RATIO.LT.1.5) RAT1 = RATIO + 3
      IF (RATIO.GE.1.5) RAT1 = RATIO + 4
      IF (RATIO.GE.2.5) RAT1 = RATIO + 5
      IRAT1 = INT(RAT1)
      GO TO 66
   65 IRAT1 = 8
   66 NDSS(2,K) = IRAT1
C-----
C-- DETERMINE THE SEVERITY FOR P.NE.Q PART OF THE CALCULATION
C-- L IS THE GLOBAL NODE NUMBER
C-----
      DO 85 L=1,N
C-----
C-- SKIP TO THE NEXT NODE IF NODE L LIES ON SEGMENT K
C-----
      DO 70 J=1,8
      IF (L.EQ.NODE(J,K)) NDSKP(K,L) = 1
      IF (L.EQ.NODE(J,K)) GO TO 85
   70 CONTINUE
C-----
C-- DETERMINE THE VECTOR D AND ITS ABSOLUTE VALUE FROM POINT P TO THE
C-- SEGMENT MID POINT AND THE DOT PRODUCT OF D AND SNOR TO EVALUATE THE
C-- COSINE OF ANGLE 'C' BETWEEN THEM, THEN CALCULATE THE SEVERITY USING
C-- THE NEW ALGORITHM.
C-----
      D2=0.
      DDOTN=0.
      DO 80 I=1,3
      D(I)=X(I,L)-SMP(I)
      DDOTN=DDOTN+D(I)*SNOR(I)
   80 D2=D2+D(I)**2
      ABSD=SQRT(D2)
      RAT=BMAX/ABSD
      C=ABS(DDOTN/(ABSD*ABSN))
      SEV = ( 3.35 + 0.6*C ) * RAT
      NSEV = INT (SEV)
      DIFF = SEV - NSEV
      IF (DIFF.GE.0.5) NSEV = NSEV + 1
      IF (NSEV.GT.5) NSEV = 5
      IF (NSEV.LT.1) NSEV = 1
C-----
C-- EVALUATE THE SEVERITY BASED ON THE RATIO DELTAR(I.E.,PMMAX - PMIN))
C-- TO WAVELENGTH LAMDA ANND COMPARE TO NSEV
C-----
      DO 75 J=1,8
      PQD2 =0.
      DO 74 IC=1,3
      PD = X(IC,NODE(J,K)) - X(IC,L)
   74 PQD2 = PQD2 + PD**2
   75 PQD(J) = SQRT(PQD2)
      PMAX = AMAX1(PQD(1),PQD(2),PQD(3),PQD(4),PQD(5),PQD(6),PQD(7),
     *           PQD(8))
      PMIN = AMIN1(PQD(1),PQD(2),PQD(3),PQD(4),PQD(5),PQD(6),PQD(7),
     *           PQD(8))
      DELR = PMAX  - PMIN
      RATIO = DELR/LAMDA
      IF (NSEV.EQ.5) GO TO 1004
      IF (RATIO.LT.0.5) GO TO 1001
      IF (RATIO.GE.3.0) GO TO 1002
      IF (RATIO.LT.1.5) RAT1 = RATIO + 3.0
      IF (RATIO.GE.1.5) RAT1 = RATIO + 4.0
      IF (RATIO.GE.2.5) RAT1 = RATIO + 5.0
cc 84->1004   83->1003   82->1002   81->1001
```

```
                MNSEV = INT(RAT1)
      GO TO 1003
 1001 MNSEV = 2
      GO TO 1003
 1002 MNSEV = 8
 1003 IF (MNSEV.GT.NSEV) NSEV = MNSEV
      IF (NSEV.GT.NDMAX) NDMAX=NSEV
      GO TO 86
 1004 IRAT = INT(RATIO)
      NSEV = NSEV + IRAT
      IF (NSEV.GT.8) NSEV=8
   86 NDSKP(K,L) = NSEV
   85 CONTINUE
C-----
C-- DETERMINE THE SEVERITY FOR CHIEF POINT P
C-- LC IS THE CHIEF POINT NUMBER
C-----
      IF (NCP.EQ.0.OR.ISEVCP.NE.0) GO TO 200
      DO 185 LC=1,NCP
C-----
C-- DETERMINE THE VECTOR D AND ITS ABSOLUTE VALUE FROM POINT P TO THE
C-- SEGMENT MID POINT AND THE DOT PRODUCT OF D AND SNOR TO EVALUATE THE
C-- COSINE OF ANGLE 'C' BETWEEN THEM, THEN CALCULATE THE SEVERITY USING
C-- THE NEW ALGORITHM.
C-----
      D2=0.
      DDOTN=0.
      DO 180 IY=1,3
      D(IY) = XCP(IY,LC) - SMP(IY)
      DDOTN =DDOTN + D(IY)*SNOR(IY)
  180 D2 = D2 + D(IY)**2
      ABSD=SQRT(D2)
      RAT=BMAX/ABSD
      C=ABS(DDOTN/ABSD*ABSN)
      SEV = (3.35 + 0.6*C) * RAT
      NSEV = INT(SEV)
      DIFF = SEV - NSEV
      IF (DIFF.GE.0.5) NSEV = NSEV + 1
      IF (NSEV.GT.5) NSEV = 5
      IF (NSEV.LT.1) NSEV = 1
C-----
C-- EVALUATE THE SEVERITY BASED ON THE RATIO DELTAR(I.E.,PMAX - PMIN)
C-- TO WAVELENGTH LAMDA AND COMPARE TO NSEV
C-----
      DO 175 J=1,8
      PQD2 =0.
      DO 174 I=1,3
      PD = X(I,NODE(J,K)) - XCP(I,LC)
  174 PQD2 = PQD2 + PD**2
  175 PQD(J) = SQRT(PQD2)
      PMAX = AMAX1(PQD(1),PQD(2),PQD(3),PQD(4),PQD(5),PQD(6),PQD(7),
     1           PQD(8))
      PMIN = AMIN1(PQD(1),PQD(2),PQD(3),PQD(4),PQD(5),PQD(6),PQD(7),
     1           PQD(8))
      DELR = PMAX - PMIN
      RATIO = DELR/LAMDA
      IF (NSEV.EQ.5) GO TO 184
      IF (RATIO.LT.0.5) GO TO 181
      IF (RATIO.GE.3.0) GO TO 182
      IF (RATIO.LT.1.5) RAT1 = RATIO + 3.0
      IF (RATIO.GE.1.5) RAT1 = RATIO + 4.0
      IF (RATIO.GE.2.5) RAT1 = RATIO + 5.0
      MNSEV = INT(RAT1)
      GO TO 183
  181 MNSEV = 2
      GO TO 183
  182 MNSEV = 8
  183 IF (MNSEV.GT.NSEV) NSEV = MNSEV
      IF (NSEV.GT.NDMAX) NDMAX=NSEV
      GO TO 186
  184 IRAT = INT(RATIO)
```

```
      NSEV = NSEV + IRAT
      IF (NSEV.GT.8) NSEV=8
  186 NDSKPC(K,LC) = NSEV
  185 CONTINUE
C-----
C-- 185 END OF LC LOOP : CHIEF POINT LOOP
C-----
C
C-----
C-- DETERMINE TH ESEVERITY FOR FIELD POINT P
C-- LF IS THE FIELD POINT NUMBER
C-----
  200 IF (ISEVFP.NE.0) GO TO 300
      DO 285 LF=1,NFP
C-----
C-- DETERMINE THE VECTOR D AND ITS ABSOLUTE VALUE FROM POINT P TO THE
C-- SEGMENT MID POINT AND THE DOT PRODUCT OF D AND SNOR TO EVALUATE THE
C-- COSINE OF ANGLE 'C' BETWEEN THEM, THEN CALCULATE THE SEVERITY USING
C-- THE NEW ALGORITHM
C-----
      D2=0.
      DDOTN=0.
      DO 280 I=1,3
      D(I) = XFP(I,LF) - SMP(I)
      DDOTN = DDOTN + D(I)*SNOR(I)
  280 D2 = D2 + D(I)**2
      ABSD=SQRT(D2)
      RAT=BMAX/ABSD
      C=ABS(DDOTN/(ABSD*ABSN))
      SEV = (3.35 + 0.6*C) * RAT
      NSEV = INT(SEV)
      DIFF = SEV -NSEV
      IF (DIFF.GE.0.5) NSEV = NSEV + 1
      IF (NSEV.GT.5) NSEV = 5
      IF (NSEV.LT.1) NSEV = 1
C-----
C-- EVALUATE THE SEVERITY BASED ON THE RATIO DELTAR(I.E.,PMAX - PMIN)
C-- TO WAVELENGTH LAMDA AND COMPARE TOO NSEV
C-----
      DO 275 J=1,8
      PQD2 =0.
      DO 274 I=1,3
      PD = X(I,NODE(J,K)) - XFP(I,LF)
  274 PQD2 = PQD2 + PD**2
  275 PQD(J) = SQRT(PQD2)
      PMAX = AMAX1(PQD(1),PQD(2),PQD(3),PQD(4),PQD(5),PQD(6),PQD(7),
     1           PQD(8))
      PMIN = AMIN1(PQD(1),PQD(2),PQD(3),PQD(4),PQD(5),PQD(6),PQD(7),
     1           PQD(8))
      DELR = PMAX - PMIN
      RATIO = DELR/LAMDA
      IF (NSEV.EQ.5) GO TO 284
      IF (RATIO.LT.0.5) GO TO 281
      IF (RATIO.GE.3.0) GO TO 282
      IF (RATIO.LT.1.5) RAT1 = RATIO + 3.0
      IF (RATIO.GE.1.5) RAT1 = RATIO + 4.0
      IF (RATIO.GE.2.5) RAT1 = RATIO + 5.0
      MNSEV = INT(RAT1)
      GO TO 283
  281 MNSEV = 2
      GO TO 283
  282 MNSEV = 8
  283 IF (MNSEV.GT.NSEV) NSEV = MNSEV
      IF (NSEV.GT.NDMAX) NDMAX=NSEV
      GO TO 286
  284 IRAT = INT(RATIO)
      NSEV = NSEV + IRAT
      IF (NSEV.GT.8) NSEV=8
  286 NDSKPF(K,LF) = NSEV
  285 CONTINUE
C-----
```

```
C-- 285 END OF LF LOOP : FIELD POINT LOOP
C-----
  300 CONTINUE
      DO 700 K=1,M
      DO 400 L=1,N
      IF (NDSKP(K,L).EQ.1) NDSKP(K,L)=NDMAX
  400 CONTINUE
      IF (ISEVCP.EQ.0) GO TO 550
      DO 500 JC = 1,NCP
      NDSKPC(K,JC) = ISEVCP
  500 CONTINUE
  550 IF (ISEVFP.EQ.0) GO TO 700
      DO 600 JF = 1,NFP
      NDSKPF(K,JF) = ISEVFP
  600 CONTINUE
  700 CONTINUE
C-----
C-- BACK TO SUBROUTINE DEGSEV
C-----
      RETURN
      END


C==1=================================================================
      SUBROUTINE CHAPE (SHPQ,SHPQ1,SHPQ2,SHPT,SHPT1,SHPT2,NIT,
     1                                                  E1,E2,WFPNQQ)
C=====================================================================
C-----
C-- TO EVALUATE SHAPE FUNCTIONS AND ITS DERIVATIVES
C-----
      DIMENSION SHPQ(8,8,144),SHPQ1(8,8,144),SHPQ2(8,8,144),
     1         SHPT(8,8,112),SHPT1(8,8,112),SHPT2(8,8,112),
     2         E1(8,112),E2(8,112),WFPNQQ(8,144),NIT(14)
      COMMON/CGAUS/Y(12,12),W(12,12),NGTHET,NGRHO

               DO 61 NID = 1,8
c-----
c-- INTERIOR OF -1,+1 SQUARE
C-----
      IF (NID.LE.5) NDQ=NID+1
      IF (NID.GT.5) NDQ=NDQ+2
      NFEQ = NDQ*NDQ
      IFE=0
      DO 10 IG1 = 1,NDQ
      DO 10 IG2 = 1,NDQ
      IFE=IFE+1
      Y1=Y(NDQ,IG1)
      Y2=Y(NDQ,IG2)
      SHPQ(1,NID,IFE) = .25*(Y1+1)*(Y2+1)*(Y1+Y2-1)
      SHPQ(2,NID,IFE) = .25*(Y1-1)*(Y2+1)*(Y1-Y2+1)
      SHPQ(3,NID,IFE) = .25*(-Y1+1)*(Y2-1)*(Y1+Y2+1)
      SHPQ(4,NID,IFE) = .25*(Y1+1)*(Y2-1)*(-Y1+Y2+1)
      SHPQ(5,NID,IFE) = .5*(Y1+1)*(1-Y2*Y2)
      SHPQ(6,NID,IFE) = .5*(Y2+1)*(1-Y1*Y1)
      SHPQ(7,NID,IFE) = .5*(Y1-1)*(-1+Y2*Y2)
      SHPQ(8,NID,IFE) = .5*(-Y2+1)*(1-Y1*Y1)
C- TURUNAN TERHADAP PSI(1)
      SHPQ1(1,NID,IFE) = .25*(Y2+1)*(2*Y1+Y2)
      SHPQ1(2,NID,IFE) = .25*(Y2+1)*(2*Y1-Y2)
      SHPQ1(3,NID,IFE) = .25*(Y2-1)*(-2*Y1-Y2)
      SHPQ1(4,NID,IFE) = .25*(Y2-1)*(-2*Y1+Y2)
      SHPQ1(5,NID,IFE) = .5*(1-Y2*Y2)
      SHPQ1(6,NID,IFE) = -Y1*(Y2+1)
      SHPQ1(7,NID,IFE) = .5*(-1+Y2*Y2)
      SHPQ1(8,NID,IFE) = -Y1*(-Y2+1)
C- TURUNAN TERHADAP PSI(2)
      SHPQ2(1,NID,IFE) = .25*(Y1+1)*(Y1+2*Y2)
      SHPQ2(2,NID,IFE) = .25*(Y1-1)*(Y1-2*Y2)
      SHPQ2(3,NID,IFE) = .25*(-Y1+1)*(Y1+2*Y2)
      SHPQ2(4,NID,IFE) = .25*(Y1+1)*(-Y1+2*Y2)
      SHPQ2(5,NID,IFE) = -Y2*(Y1+1)
```

```
      SHPQ2(6,NID,IFE) = .5*(1-Y1*Y1)
      SHPQ2(7,NID,IFE) = Y2*(Y1-1)
      SHPQ2(8,NID,IFE) = -.5*(1-Y1*Y1)
C-
      WFPNQQ(NID,IFE)=W(NDQ,IG1)*W(NDQ,IG2)
   10 CONTINUE
C-----
C-- INTERIOR OF 1,1,1 TRIANGLE
C-----
            IF (NID.EQ.1) NDI=4
      IF (NID.EQ.2) NDI=5
      IF (NID.EQ.3) NDI=8
      IF (NID.EQ.4) NDI=9
      IF (NID.EQ.5) NDI=11
      IF (NID.EQ.6) NDI=12
      IF (NID.EQ.7) NDI=13
      IF (NID.EQ.8) NDI=14
      NFE=NIT(NDI)

            DO 15 IFE=1,NFE
      Y1=E1(NID,IFE)
      Y2=E2(NID,IFE)
      Y3=1.-Y1-Y2

            SHPT(1,NID,IFE) = Y1*(2*Y1-1)
      SHPT(2,NID,IFE) = 0.0
      SHPT(3,NID,IFE) = Y2*(2*Y2-1)
      SHPT(4,NID,IFE) = Y3*(2*Y3-1)
      SHPT(5,NID,IFE) = 4*Y1*Y3
      SHPT(6,NID,IFE) = 4*Y1*Y2
      SHPT(7,NID,IFE) = 0.0
      SHPT(8,NID,IFE) = 4*Y2*Y3
      SHPT1(1,NID,IFE) = 4*Y1 - 1
      SHPT1(2,NID,IFE) = 0.0
      SHPT1(3,NID,IFE) = 0.0
      SHPT1(4,NID,IFE) = 1 - 4*Y3
      SHPT1(5,NID,IFE) = 4*(1-2*Y1-Y2)
      SHPT1(6,NID,IFE) = 4*Y2
      SHPT1(7,NID,IFE) = 0.0
      SHPT1(8,NID,IFE) = -4*Y2
      SHPT2(1,NID,IFE) = 0.0
      SHPT2(2,NID,IFE) = 0.0
      SHPT2(3,NID,IFE) = 4*Y2 - 1
      SHPT2(4,NID,IFE) = 1 - 4*Y3
      SHPT2(5,NID,IFE) = -4*Y1
      SHPT2(6,NID,IFE) = 4*Y1
      SHPT2(7,NID,IFE) = 0.0
      SHPT2(8,NID,IFE) = 4*(1-Y1-2*Y2)
   15 CONTINUE
   61 CONTINUE

ctambahan darwin buat ngecek
C-------------------------------------------------------------------------------
c     DO 1091 L = 1,8
c           IF (L.EQ.1) NDI=4
c     IF (L.EQ.2) NDI=5
c     IF (L.EQ.3) NDI=8
c     IF (L.EQ.4) NDI=9
c     IF (L.EQ.5) NDI=11
c     IF (L.EQ.6) NDI=12
c     IF (L.EQ.7) NDI=13
c     IF (L.EQ.8) NDI=14
c     NFE=NIT(NDI)
c                       WRITE(6,1098)
c 1098                  FORMAT(/1X,20(1H=),'NILAI VARIABEL SHPT(1-8,L,K)',20(1H=))
c                       WRITE(6,1097)
c 1097                  FORMAT(1X,'L',2X,'K',8X,'1',8X,'2',8X,'3',8X,'4',8X,'5',
c    1                    8X,'6',8X,'7',8X,'8')
c                        DO 1091 K = 1,NFE
c                        WRITE(6,1092) L,K,(SHPT(JA,L,K),JA=1,8)
c 1092 FORMAT (1X,I1,1X,I3,1X,8(1X,F8.5))
```

```
c 1091 CONTINUE
c
c             DO 1093 L = 1,8
c             IF (L.EQ.1) NDI=4
c     IF (L.EQ.2) NDI=5
c     IF (L.EQ.3) NDI=8
c     IF (L.EQ.4) NDI=9
c     IF (L.EQ.5) NDI=11
c     IF (L.EQ.6) NDI=12
c     IF (L.EQ.7) NDI=13
c     IF (L.EQ.8) NDI=14
c     NFE=NIT(NDI)
c                         WRITE(6,1099)
c 1099                    FORMAT(/1X,20(1H=),'NILAI VARIABEL SHPT1(1-8,L,K)',20(1H=))
c                         WRITE(6,1097)
c                         DO 1093 K = 1,NFE
c                           WRITE(6,1094) L,K,(SHPT1(JA,L,K),JA=1,8)
c 1094 FORMAT (1X,I1,1X,I3,1X,8(1X,F8.5))
c 1093 CONTINUE
c
c             DO 1095 L = 1,8
c             IF (L.EQ.1) NDI=4
c     IF (L.EQ.2) NDI=5
c     IF (L.EQ.3) NDI=8
c     IF (L.EQ.4) NDI=9
c     IF (L.EQ.5) NDI=11
c     IF (L.EQ.6) NDI=12
c     IF (L.EQ.7) NDI=13
c     IF (L.EQ.8) NDI=14
c     NFE=NIT(NDI)
c                         WRITE(6,1082)
c 1082                    FORMAT(/1X,20(1H=),'NILAI VARIABEL SHPT2(1-8,L,K)',20(1H=))
c                         WRITE(6,1097)
c                         DO 1095 K = 1,NFE
c                           WRITE(6,1096) L,K,(SHPT2(JA,L,K),JA=1,8)
c 1096 FORMAT (1X,I1,1X,I3,1X,8(1X,F8.5))
c 1095 CONTINUE
c
C-------------------------------------------------------------------------------
              RETURN
      END

C=======================================================================
      SUBROUTINE COEF(N,NPCH,M,A,B,BTN,C,D,PFP,X,XCP,XFP,NCP,NFP,NODE,
     1     SHPQ,SHPQ1,SHPQ2,SHPT,SHPT1,SHPT2,NIT,SHAPQ,SHAPQ1,SHAPQ2,
     2     SHAPT,SHAPT1,SHAPT2,WFPQQ,WFPQT,WFPNQQ,WFPNQT,NDSKP,NDSKPC,
     3     NDSKPF,KKK,KKMAX,FPP,EPHI,EPHIF)
C=======================================================================
C-----
C-- TO COMPUTE THE COEFFISIEN OF MATRIX A, B AND BTN IN EQUATION
C-- [A] [PHI] + [B] [DPHI/DN] = [BTN]
C-- [C] [PHI] + [D] [DPHI/DN] = [PFP]
C-----
      DIMENSION AA(3),BB(3),XQ(3),XP(3),NIT(14),EPHI(NPCH),EPHIF(NFP),
     1         DX(3),RGRAD(3),FPP(NFP),BTN(NPCH),PFP(NFP)
C-
      DIMENSION A(NPCH,N),B(NPCH,N),C(NFP,N),D(NFP,N),
     1         NODE(8,M),WFPNQQ(8,144),WFPNQT(8,112)
C-
      DIMENSION SHPQ(8,8,144),SHPQ1(8,8,144),SHPQ2(8,8,144),
     1         SHPT(8,8,112),SHPT1(8,8,112),SHPT2(8,8,112)
C-
      DIMENSION SHAPQ(8,3,8,100),SHAPQ1(8,3,8,100),SHAPQ2(8,3,8,100),
     1         SHAPT(8,2,8,100),SHAPT1(8,2,8,100),SHAPT2(8,2,8,100),
     2         WFPQQ(8,3,100),WFPQT(8,2,100)
C-
      INTEGER*2 NDSKP(M,N),III(8,150),JJMAX(8),KKK(8,M),KKMAX(6),
     1         NDSKPC(M,NCP),IIC(8,10),JCMAX(8),
     2         NDSKPF(M,NFP),IIF(8,200),JFMAX(8)
      INTEGER PSYM
      REAL X(3,N),XCP(3,NCP),XFP(3,NFP)
```

```
      REAL JAC,NSTAR(3)
      COMPLEX A,B,BTN,C,D,PFP,FPP
      COMPLEX UKERN1,UKERN2,ARG,ARGT,EPHI,EPHIF,IK
      LOGICAL IPS2,INTP
      COMMON /SYM/PSYM
      COMMON/CGAUS/Y(12,12),W(12,12),NGTHET,NGRHO
      COMMON/NGTR/NGRH(8,2,2),NGTH(8,2,2)/SEV/KSS
      COMMON/OMEGA/WN
      COMMON/IDEN/IDD
      COMMON/SCAT/ISC,AF,BE,GA
C-----
C-- EVALUATE CONSTANTS
C-----
      PI = 3.141593
      PIT4 = PI * 4.
      ROOT3 = SQRT(3.0)
      CCC = 1.0
      CCR = ROOT3/2.0
C-----
C-- INITIALIZE A,B AND BTN MATRIX
C-----
      DO 5 I=1,NPCH
      BTN(I) = CMPLX(0.,0.)
            DO 5 J=1,N
      A(I,J) = CMPLX(0.,0.)
    5 B(I,J) = CMPLX(0.,0.)
C-----
C-- INITIALIZE C,D AND PFP MATRIX
C-----
      IK = CMPLX(0.0,WN)
      DO 505 I=1,NFP
      PFP(I) = -PIT4*FPP(I)/(IK*415.0)
      DO 505 J=1,N
      C(I,J) = CMPLX(0.,0.)
  505 D(I,J) = CMPLX(0.,0.)
C-----
C-- INCREMENT SEGMENT SEVERITY NUMBER
C-----
      DO 650 KSS = 3,8
      KSSM2=KSS-2
      NKS = KKMAX(KSSM2)
      IF (NKS.EQ.0) GO TO 650
C--
      CALL PEQ(SHAPQ,SHAPQ1,SHAPQ2,SHAPT,SHAPT1,SHAPT2,WFPQQ,WFPQT,NGPQ)
C--
            DO 603 KSSC=1,NKS
            K = KKK(KSS,KSSC)
            NLN=8
            IF (NODE(2,K).EQ.NODE(3,K)) NLN=6
C-----
C-- INITIALIZE II VALUES TO ZERO AND SORT PER VALUE OF NDI
C-----
            DO 6 IC=1,8
            JJMAX(IC)=0
            DO 6 JC=1,N
    6       III(IC,JC) = 0
            JJ1 = 0
            JJ2 = 0
            JJ3 = 0
            JJ4 = 0
            JJ5 = 0
            JJ6 = 0
            JJ7 = 0
            JJ8 = 0
            DO 10 JC=1,N
            NID = NDSKP(K,JC)
   15       GO TO (1501,1502,1503,1504,1505,1506,1507,1508),NID
 1501       JJ1=JJ1+1
            III(NID,JJ1) = JC
            GO TO 10
 1502       JJ2=JJ2+1
```

```
            III(NID,JJ2) = JC
            GO TO 10
 1503       JJ3=JJ3+1
            III(NID,JJ3) = JC
            GO TO 10
 1504       JJ4=JJ4+1
            III(NID,JJ4) = JC
            GO TO 10
 1505       JJ5=JJ5+1
            III(NID,JJ5) = JC
            GO TO 10
 1506       JJ6=JJ6+1
            III(NID,JJ6) = JC
            GO TO 10
 1507       JJ7=JJ7+1
            III(NID,JJ7) = JC
            GO TO 10
 1508       JJ8=JJ8+1
            III(NID,JJ8) = JC
   10       CONTINUE
            JJMAX(1)=JJ1
            JJMAX(2)=JJ2
            JJMAX(3)=JJ3
            JJMAX(4)=JJ4
            JJMAX(5)=JJ5
            JJMAX(6)=JJ6
            JJMAX(7)=JJ7
            JJMAX(8)=JJ8
C-----
C-- P.NE.Q
C-----
            DO 110 NID=1,8
            IF (JJMAX(NID).EQ.0) GO TO 110
            IF (NLN.EQ.8) GO TO 20
            IF (NID.EQ.1) NDI=4
            IF (NID.EQ.2) NDI=5
            IF (NID.EQ.3) NDI=8
            IF (NID.EQ.4) NDI=9
            IF (NID.EQ.5) NDI=11
            IF (NID.EQ.6) NDI=12
            IF (NID.EQ.7) NDI=13
            IF (NID.EQ.8) NDI=14
            NFE=NIT(NDI)
            GO TO 25
   20       NX=NID+1
            NFE=NX*NX
            IF (NID.EQ.6) NFE=(NID+2)**2
            IF (NID.EQ.7) NFE=(NID+3)**2
            IF (NID.EQ.8) NFE=(NID+4)**2
C-----
C-- INCREMENT INDICES IDENTIFIYING POINTS FOR GAUSSIAN QUADRATURE
C-----
   25       DO 100 IFE=1,NFE
C-----
C-- EVALUATE JACOBIAN AND COMPONENTS OF MODIFIED UNIT NORMAL
C-- AA AND BB ARE VECTORS TANGENTIAL TO THE LOCAL COORDINATE
C-- Y1 AND Y2 RESPECTIVELY
C-- XQ IS THE GLOBAL COORDINATES OF (Y1,Y2) POINT OF AN ELEMENT
C-- ACCORDING TO IFE
C-----
            DO 30 I=1,3
            XQ(I) = 0.
            AA(I) = 0.
            BB(I) = 0.
            DO 30 JALPH = 1,8
            XIN = X(I,NODE(JALPH,K))
            IF (NLN.EQ.6) GO TO 31
            XQ(I) = XQ(I) + SHPQ (JALPH,NID,IFE)*XIN
            AA(I) = AA(I) + SHPQ1(JALPH,NID,IFE)*XIN
            BB(I) = BB(I) + SHPQ2(JALPH,NID,IFE)*XIN
            GO TO 30
```

```
  31        IF (JALPH.EQ.2.OR.JALPH.EQ.7) GO TO 30
            XQ(I) = XQ(I) + SHPT (JALPH,NID,IFE)*XIN
            AA(I) = AA(I) + SHPT1(JALPH,NID,IFE)*XIN
            BB(I) = BB(I) + SHPT2(JALPH,NID,IFE)*XIN
  30        CONTINUE
C-----
C-- NSTAR NORMAL VECTOR
C-- JAC   JACOBIAN OF TRANSFORMATION, .EQ. MAG OF NORMAL VECTOR
C-----
            NSTAR(1) = AA(2)*BB(3) - AA(3)*BB(2)
            NSTAR(2) = AA(3)*BB(1) - AA(1)*BB(3)
            NSTAR(3) = AA(1)*BB(2) - AA(2)*BB(1)
            JAC = SQRT(NSTAR(1)**2+NSTAR(2)**2+NSTAR(3)**2)
C-----
C-- UTILIZE SYMMETRY
C-----
            NJJ=JJMAX(NID)
            IPS2 = .FALSE.
            NPSYM = 1
            IF (PSYM.NE.0) NPSYM = 2
             DO 95 IPSYM = 1,NPSYM
                      IF (IPSYM.EQ.2) IPS2 = .TRUE.
C-----
C-- 90 INCREMENT P NODE NUMBER
C-----
            DO 90 JJ=1,NJJ
            IR=III(NID,JJ)
            INTP = .FALSE.
            IF (PSYM.EQ.0) GO TO 35
            IF (X(PSYM,IR).EQ.0.) INTP= .TRUE.
  35        CONTINUE
            IF (.NOT.IPS2) GO TO 38
            IF (.NOT.INTP) GO TO 42
  38        CONTINUE
            DO 40 JALPH = 1,8
            IF (X(1,NODE(JALPH,K)).EQ.X(1,IR).AND.X(2,NODE(JALPH,K)).EQ.
   1        X(2,IR).AND.X(3,NODE(JALPH,K)).EQ.X(3,IR)) GO TO 90
  40        CONTINUE
  42        CONTINUE
            XP(1) = X(1,IR)
            XP(2) = X(2,IR)
            XP(3) = X(3,IR)
            IF (IPS2) XP(PSYM) = -XP(PSYM)

C-----
C--  R          R(P,Q) -- DISTANCE BETWEEN P AND Q
C--  RGRAD(I)    DR/DX(I)
C--  DRDN        DR/DN * JAC
C-----
C-
            DX(1) = XQ(1) - XP(1)
            DX(2) = XQ(2) - XP(2)
            DX(3) = XQ(3) - XP(3)
            R2 = DX(1)*DX(1) + DX(2)*DX(2) + DX(3)*DX(3)
            R = SQRT(R2)
            RGRAD(1) = DX(1)/R
            RGRAD(2) = DX(2)/R
            RGRAD(3) = DX(3)/R
            DRDN = RGRAD(1)*NSTAR(1) + RGRAD(2)*NSTAR(2) +RGRAD(3)*NSTAR(3)
C-----
C-- EVALUATE THE KERNELS (UKERN1 & UKERN2)
C-- IDD .EQ. 1 -- INTERIOR PROBLEM; IDD .NE. 1 -- EXTERIOR PROBLEM
C-- ARG     -IKR(P,Q)
C-- ARGT    (1+IKR)
C-- UKERN1 K1(P,Q) = DK2/DN = (DK2/DR) (DR/DN)
C-- UKERN2 K2(P,Q) = EXP (-IKR(P,Q))/R(P,Q)
C-- TTSTAR D(1/R)/DN = -(1/R2) (DR/DN)
C-----
            ARG = CMPLX(0.,-WN*R)
            UKERN2 = CEXP(ARG)/R
            ARGT = CMPLX(1.,WN*R)
```

```
            UKERN1 = -ARGT*CEXP(ARG)*DRDN/R2
            TTSTAR = -DRDN/R2
            IF (PSYM.EQ.0) GO TO 45
            IF (IPS2.AND.INTP) GO TO 90
 43         IF (IPS2.OR..NOT.INTP) GO TO 45
            UKERN1 = UKERN1 * 2.
            UKERN2 = UKERN2 * 2.
            TTSTAR = TTSTAR * 2.
 45         CONTINUE
            IF (NLN.EQ.6) WTIG=WFPNQT(NID,IFE)*CCR
            IF (NLN.EQ.8) WTIG=WFPNQQ(NID,IFE)*4.
            DO 80 JA = 1,8
            IF (NLN.EQ.6.AND.(JA.EQ.2.OR.JA.EQ.7)) GO TO 80
            IC = NODE(JA,K)
            IF (NLN.EQ.6) SHALPH = SHPT(JA,NID,IFE)
            IF (NLN.EQ.8) SHALPH = SHPQ(JA,NID,IFE)
            A(IR,IC) = A(IR,IC) + SHALPH * UKERN1 * WTIG
            B(IR,IC) = B(IR,IC) + SHALPH * UKERN2 * JAC * WTIG
 80         CONTINUE
            A(IR,IR) = A(IR,IR) - TTSTAR * WTIG
 90         CONTINUE
 95         CONTINUE
100         CONTINUE
110         CONTINUE
C-----
C--  90 END OF JJ LOOP
C--  95 END OF IPSYM LOOP
C-- 100 END OF IFE LOOP
C-- 110 END OF NID LOOP
C-----
C
C-----
C-- P.EQ.Q
C-- PLACE P AT EACH NODE OF THE SEGMENT
C-----
            CCC=1
            IF (NLN.EQ.6) CCC=CCR
            DO 230 JA = 1,8
            IF (NLN.EQ.6.AND.(JA.EQ.2.OR.JA.EQ.7)) GO TO 230
            RO1=(23-NLN)/8
            RO2=(3+JA)/4
            KQT=INT(RO1)
            KLN=INT(RO2)
C-----
C-- NGRHO   NUMBER OF EVALUATIONS IN RHO DIRECTION
C-- NGTHET  NUMBER OF EVALUATIONS IN THETA DIRECTION
C-- NGPQ    TOTAL NUMBER OF EVALUATIONS IN POLAR COORDINATE
C--         FOR P.EQ.Q
C-----
            NGRHO=NGRH(KSS,KQT,KLN)
            NGTHET=NGTH(KSS,KQT,KLN)
            NGPQ=NGRHO*NGTHET
            IR = NODE(JA,K)
            LMAX = 2
            IF (JA.GT.4) LMAX = 3
            IF (NLN.EQ.6) LMAX = 2
            INTP = .FALSE.
            IF (PSYM.EQ.0) GO TO 140
            IF (X(PSYM,IR).EQ.0.) INTP = .TRUE.
 140        CONTINUE
C-----
C-- L     INCREMENT TRIANGULAR SUBDIVISION OF MODIFIED UNIT NORMAL
C-- IPQ   INCREMENT NUMBER OF EVALUATION
C-----
            DO 220 L = 1,LMAX
            DO 200 IPQ=1,NGPQ
C-----
C-- EVALUATE JACOBIAN AND COMPONENTS OF MODIFIED UNIT NORMAL
C-- AA AND BB ARE VECTORS TANGENTIAL TO THE LOCAL COORDINATE
C-- XQ IS THE GLOBAL COORDINATES OF (RHO,THETA) POINT OF AN ELEMENT
C-- ACCORDING TO IPQ
```

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C-----
  146       DO 150 I=1,3
            XQ(I) = 0
            AA(I) = 0
            BB(I) = 0
            DO 150 JALPH = 1,8
            XIN = X(I,NODE(JALPH,K))
            IF (NLN.EQ.6) GO TO 151
            XQ(I) = XQ(I) + SHAPQ(JALPH,L,JA,IPQ)*XIN
            AA(I) = AA(I) + SHAPQ1(JALPH,L,JA,IPQ)*XIN
            BB(I) = BB(I) + SHAPQ2(JALPH,L,JA,IPQ)*XIN
            GO TO 150
  151       IF (JALPH.EQ.2.OR.JALPH.EQ.7) GO TO 150
            XQ(I) = XQ(I) + SHAPT(JALPH,L,JA,IPQ)*XIN
            AA(I) = AA(I) + SHAPT1(JALPH,L,JA,IPQ)*XIN
            BB(I) = BB(I) + SHAPT2(JALPH,L,JA,IPQ)*XIN
  150       CONTINUE
C-----
C-- NSTAR   NORMAL VECTOR
C-- JAC     JACOBIAN OF TRANSFORMATION, .EQ. MAG OF NORMAL VECTOR
C-----
            NSTAR(1) = AA(2)*BB(3) - AA(3)*BB(2)
            NSTAR(2) = AA(3)*BB(1) - AA(1)*BB(3)
            NSTAR(3) = AA(1)*BB(2) - AA(2)*BB(1)
            JAC = SQRT(NSTAR(1)**2+NSTAR(2)**2+NSTAR(3)**2)
C-----
C-- R       R(P,Q) -- DISTANCE BETWEEN P AND Q
C-- RGRAD(I)  DR/XY(I)
C-- DRDN      DR/DN
C-----
            DX(1) = XQ(1) - X(1,IR)
            DX(2) = XQ(2) - X(2,IR)
            DX(3) = XQ(3) - X(3,IR)
            R2 = DX(1)*DX(1) + DX(2)*DX(2) + DX(3)*DX(3)
            R = SQRT(R2)
            RGRAD(1) = DX(1)/R
            RGRAD(2) = DX(2)/R
            RGRAD(3) = DX(3)/R
            DRDN = RGRAD(1)*NSTAR(1) + RGRAD(2)*NSTAR(2) + RGRAD(3)*NSTAR(3)
C-----
C-- EVALUATE THE KERNELS (UKERN1 & UKERN2)
C-- IDD .EQ. 1 -- INTERIOR PROBLEM; IDD .NE. 1 -- EXTERIOR PROBLEM
C-- ARG     -IKR(P,Q)
C-- ARGT    (1+IKR)
C-- UKERN1   K1(P,Q) = DK2/DR) (DR/DN)
C-- UKERN2   K2(P,Q) = EXP (-IKR (P,Q) / R(P,Q)
C-- TTSTAR   D(1/R)/DN = -(1/R2) (DR/DN)
C-----
            ARG = CMPLX(0.,-WN*R)
            UKERN2 = CEXP(ARG)/R
            ARGT = CMPLX(1.,WN*R)
            UKERN1 = -ARGT*CEXP(ARG)*DRDN/R2
            TTSTAR = -DRDN/R2
C-----
C-- UTILIZE SYMMETRI
C-----
            IF (.NOT.INTP) GO TO 155
            UKERN1 = UKERN1 * 2.
            UKERN2 = UKERN2 * 2.
            TTSTAR = TTSTAR * 2.
  155       CONTINUE
            IF (NLN.EQ.6) WTRDR=WFPQT(JA,L,IPQ)*CCC
            IF (NLN.EQ.8) WTRDR=WFPQQ(JA,L,IPQ)*CCC
            DO 190 J = 1,8
            IF (NLN.EQ.6.AND.(J.EQ.2.OR.J.EQ.7)) GO TO 190
            IC = NODE(J,K)
            IF (NLN.EQ.6) SHALPH=SHAPT(J,L,JA,IPQ)
            IF (NLN.EQ.8) SHALPH=SHAPQ(J,L,JA,IPQ)
            A(IR,IC) = A(IR,IC) + SHALPH * UKERN1 * WTRDR
            B(IR,IC) = B(IR,IC) + SHALPH * UKERN2 * JAC * WTRDR
            DO 185 I = 1,N
```

```
            IF (X(1,I).NE.X(1,IR).OR.X(2,I).NE.X(2,IR).OR.
     1      X(3,I).NE.X(3,IR)) GO TO 185
            IF (I.EQ.IR) GO TO 185
            A(I,IC) = A(I,IC) + SHALPH * UKERN1 * WTRDR
            B(I,IC) = B(I,IC) + SHALPH * UKERN2 * JAC * WTRDR
  185       CONTINUE
  190       CONTINUE
            A(IR,IR) = A(IR,IR) - TTSTAR * WTRDR
  200       CONTINUE
  220       CONTINUE
  230       CONTINUE
C-----
C-- 200 END OF IPQ LOOP
C-- 220 END OF L LOOP
C-- 230 END OF JA LOOP
C-----
C
C-----
C-- P CHIEF POINT
C-- INITIALIZE IIC VALUES TO ZERO AND SORT PER VALUE OF NDSKPC/NID
C-----
            IF (NCP.EQ.0) GO TO 500
            DO 407 IC = 1,8
            JCMAX(IC) = 0
            DO 407 JC = 1,NCP
  407       IIC(IC,JC) = 0
            JC1 = 0
            JC2 = 0
            JC3 = 0
            JC4 = 0
            JC5 = 0
            JC6 = 0
            JC7 = 0
            JC8 = 0
            DO 410 JC=1,NCP
            NID = NDSKPC(K,JC)
  415       GO TO (1601,1602,1603,1604,1605,1606,1607,1608),NID
 1601       JC1=JC1+1
            IIC(NID,JC1) = JC
            GO TO 410
 1602       JC2=JC2+1
            IIC(NID,JC2) = JC
            GO TO 410
 1603       JC3=JC3+1
            IIC(NID,JC3) = JC
            GO TO 410
 1604       JC4=JC4+1
            IIC(NID,JC4) = JC
            GO TO 410
 1605       JC5=JC5+1
            IIC(NID,JC5) = JC
            GO TO 410
 1606       JC6=JC6+1
            IIC(NID,JC6) = JC
            GO TO 410
 1607       JC7=JC7+1
            IIC(NID,JC7) = JC
            GO TO 410
 1608       JC8=JC8+1
            IIC(NID,JC8) = JC

  410       CONTINUE
            JCMAX(1) = JC1
            JCMAX(2) = JC2
            JCMAX(3) = JC3
            JCMAX(4) = JC4
            JCMAX(5) = JC5
            JCMAX(6) = JC6
            JCMAX(7) = JC7
            JCMAX(8) = JC8
C--
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```
            DO 4110 NID=1,8
            IF (JCMAX(NID).EQ.0) GO TO 4110
            IF (NLN.EQ.8) GO TO 420
            IF (NID.EQ.1) NDI=4
            IF (NID.EQ.2) NDI=5
            IF (NID.EQ.3) NDI=8
            IF (NID.EQ.4) NDI=9
            IF (NID.EQ.5) NDI=11
            IF (NID.EQ.6) NDI=12
            IF (NID.EQ.7) NDI=13
            IF (NID.EQ.8) NDI=14
            NFE=NIT(NDI)
            GO TO 425
 420        NX=NID+1
            NFE=NX*NX
            IF (NID.EQ.6) NFE=(NID+2)**2
            IF (NID.EQ.7) NFE=(NID+3)**2
            IF (NID.EQ.8) NFE=(NID+4)**2
C-----
C-- INCREMENT INDICES IDENTIFYING POINTS FO RGAUSSIAN QUADRATURE
C-----
 425        DO 4100 IFE=1,NFE
C-----
C-- EVALUATE JACOBIAN AND COMPONENTS OF MODIFIED UNIT NORMAL
C-- AA AND BB ARE VECTORS TANGENTIAL TO THE LOCAL COORDINATE
C-- Y1 AND Y2 RESPECTIVELY
C-- XQ IS THE GLOBAL COORDINATES OF (Y1,Y2) POINT OF AN ELEMENT
C-- ACCORDING TO IFE
C-----
            DO 430 I = 1,3
            XQ(I) = 0
            AA(I) = 0
            BB(I) = 0
            DO 430 JALPH = 1,8
            XIN = X(I,NODE(JALPH,K))
            IF (NLN.EQ.6) GO TO 431
            XQ(I) = XQ(I) + SHPQ(JALPH,NID,IFE)*XIN
            AA(I) = AA(I) + SHPQ1(JALPH,NID,IFE)*XIN
            BB(I) = BB(I) + SHPQ2(JALPH,NID,IFE)*XIN
            GO TO 430
 431        IF (JALPH.EQ.2.OR.JALPH.EQ.7) GO TO 430
            XQ(I) = XQ(I) + SHPT(JALPH,NID,IFE)*XIN
            AA(I) = AA(I) + SHPT1(JALPH,NID,IFE)*XIN
            BB(I) = BB(I) + SHPT2(JALPH,NID,IFE)*XIN
 430        CONTINUE
C-----
C-- NSTAR   NORMAL VECTOR
C-- JAC     JACOBIAN OF TRANSFORMATION, .EQ. MAG OF NORMAL VECTOR
C-----
            NSTAR(1) = AA(2)*BB(3) - AA(3)*BB(2)
            NSTAR(2) = AA(3)*BB(1) - AA(1)*BB(3)
            NSTAR(3) = AA(1)*BB(2) - AA(2)*BB(1)
            JAC = SQRT(NSTAR(1)**2+NSTAR(2)**2+NSTAR(3)**2)
C-----
C-- UTILIZE SYMMETRI
C-----
            NJC=JCMAX(NID)
            IPS2 = .FALSE.
            NPSYM = 1
            IF (PSYM.NE.0) NPSYM = 2
            DO 495 IPSYM = 1,NPSYM
            IF (IPSYM.EQ.2) IPS2 = .TRUE.
C-----
C-- 490 INCREMENT CHIEF POINT NUMBER
C-----
            DO 490 JC=1,NJC
            IR=IIC(NID,JC)
            INTP = .FALSE.
            IF (PSYM.EQ.0) GO TO 435
            GO TO 435
            IF (XCP(PSYM,IR).EQ.0) INTP = .TRUE.
```

```
 435      CONTINUE
          XP(1) = XCP(1,IR)
          XP(2) = XCP(2,IR)
          XP(3) = XCP(3,IR)
          IF (IPS2) XP(PSYM) = -XP(PSYM)
C-----
C-- R      R(P,Q) -- DISTANCE BETWEEN P AND Q
C-- RGRAD(I)  DR/XY(I)
C-- DRDN     DR/DN
C-----
          DX(1) = XQ(1) - XP(1)
          DX(2) = XQ(2) - XP(2)
          DX(3) = XQ(3) - XP(3)
          R2 = DX(1)*DX(1) + DX(2)*DX(2) + DX(3)*DX(3)
          R = SQRT(R2)
          RGRAD(1) = DX(1)/R
          RGRAD(2) = DX(2)/R
          RGRAD(3) = DX(3)/R
          DRDN = RGRAD(1)*NSTAR(1)+RGRAD(2)*NSTAR(2)+RGRAD(3)*NSTAR(3)
C-----
C-- EVALUATE THE KERNELS (UKERN1 & UKERN2)
C-- IDD .EQ. 1 -- INTERIOR PROBLEM; IDD .NE. 1 -- EXTERIOR PROBLEM
C-- ARG     -IKR(P,Q)
C-- ARGT    (1+IKR)
C-- UKERN1   K1(P,Q) = DK2/DN = (DK2/DR) (DR/DN)
C-- UKERN2   K2(P,Q) = EXP (-IKR(P,Q) ) / r(P,Q)
C-----
          ARG = CMPLX(0.,-WN*R)
          UKERN2 = CEXP(ARG)/R
          ARGT = CMPLX(1.,WN*R)
          UKERN1 = -ARGT*CEXP(ARG)*DRDN/R2
          IF (PSYM.EQ.0) GO TO 445
          IF (IPS2.AND.INTP) GO TO 490
 443      IF (IPS2.OR..NOT.INTP) GO TO 445
          UKERN1 = UKERN1 * 2.
          UKERN2 = UKERN2 * 2.
 445      CONTINUE
          IF (NLN.EQ.6) WTIG=WFPNQT(NID,IFE)*CCR
          IF (NLN.EQ.8) WTIG=WFPNQT(NID,IFE)*4.
          DO 480 JA = 1,8
          IF (NLN.EQ.6.AND.(JA.EQ.2.OR.JA.EQ.7)) GO TO 480
          IC = NODE(JA,K)
          IF (NLN.EQ.6) SHALPH = SHPT(JA,NID,IFE)
          IF (NLN.EQ.8) SHALPH = SHPQ(JA,NID,IFE)
          ICH = N + IR
          A(ICH,IC) = A(ICH,IC) + SHALPH * UKERN1 * WTIG
          B(ICH,IC) = B(ICH,IC) + SHALPH * UKERN2 * JAC * WTIG
 480      CONTINUE
 490      CONTINUE
 495      CONTINUE
 4100     CONTINUE
 4110     CONTINUE
C-----
C-- 490 END OF JF LOOP
C-- 495 END OF IPSYM LOOP
C-- 4100 END OF IFE LOOP
C-- 4110 END OF NIDO LOOP
C-----
C
C-----
C-- P FIELD POINT
C-- INITIALIZE IIF VALUES TO ZERO AND SORT PER VALUE OF NDSKPF/NID
C-----
 500      DO 506 IF1=1,8
          JFMAX(IF1) = 0
          DO 506 JF=1,NFP
 506      IIF(IF1,JF) = 0
          JF1 = 0
          JF2 = 0
          JF3 = 0
          JF4 = 0
```

```
            JF5 = 0
            JF6 = 0
            JF7 = 0
            JF8 = 0
            DO 510 JF=1,NFP
            NID = NDSKPF(K,JF)
 515        GO TO (1701,1702,1703,1704,1705,1706,1707,1708),NID
1701        JF1=JF1+1
            IIF(NID,JF1) = JF
            GO TO 510
1702        JF2=JF2+1
            IIF(NID,JF2) = JF
            GO TO 510
1703        JF3=JF3+1
            IIF(NID,JF3) = JF
            GO TO 510
1704        JF4=JF4+1
            IIF(NID,JF4) = JF
            GO TO 510
1705        JF5=JF5+1
            IIF(NID,JF5) = JF
            GO TO 510
1706        JF6=JF6+1
            IIF(NID,JF6) = JF
            GO TO 510
1707        JF7=JF7+1
            IIF(NID,JF7) = JF
            GO TO 510
1708        JF8=JF8+1
            IIF(NID,JF8) = JF
 510        CONTINUE
            JFMAX(1) = JF1
            JFMAX(2) = JF2
            JFMAX(3) = JF3
            JFMAX(4) = JF4
            JFMAX(5) = JF5
            JFMAX(6) = JF6
            JFMAX(7) = JF7
            JFMAX(8) = JF8
C-------------------------
            DO 5110 NID = 1,8
            IF (JFMAX(NID).EQ.0) GO TO 5110
            IF (NLN.EQ.8) GO TO 520
            IF (NID.EQ.1) NDI=4
            IF (NID.EQ.2) NDI=5
            IF (NID.EQ.3) NDI=8
            IF (NID.EQ.4) NDI=9
            IF (NID.EQ.5) NDI=11
            IF (NID.EQ.6) NDI=12
            IF (NID.EQ.7) NDI=13
            IF (NID.EQ.8) NDI=14
            NFE=NIT(NDI)
            GO TO 525
 520        NX=NID+1
            NFE=NX*NX
            IF (NID.EQ.6) NFE=(NID+2)**2
            IF (NID.EQ.7) NFE=(NID+3)**2
            IF (NID.EQ.8) NFE=(NID+4)**2
C-----
C-- INCREMENT INDICES IDENTIFYING POINTS FOR GAUSSIAN QUADRATURE
C-----
 525        DO 5100 IFE=1,NFE
C-----
C-- EVALUATE JACOBIAN AND COMPONENTS OF MODIFIED UNIT NORMAL
C-- AA AND BB ARE VECTORS TANGENTIAL TO THE LOCAL COORDINATE
C-- Y1 AND Y2 RESPECTIVELY
C-- XQ IS THE GLOBAL COORDINATES OF (Y1,Y2) POINT OF AN ELEMENT
C-- ACCORDING TO IFE
C-----
            DO 530 I = 1,3
            XQ(I) = 0.
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            AA(I) = 0.
            BB(I) = 0.
            DO 530 JALPH = 1,8
            XIN = X(I,NODE(JALPH,K))
            IF (NLN.EQ.6) GO TO 531
            XQ(I) = XQ(I) + SHPQ(JALPH,NID,IFE)*XIN
            AA(I) = AA(I) + SHPQ1(JALPH,NID,IFE)*XIN
            BB(I) = BB(I) + SHPQ2(JALPH,NID,IFE)*XIN
            GO TO 530
 531        IF (JALPH.EQ.2.OR.JALPH.EQ.7) GO TO 530
            XQ(I) = XQ(I) + SHPT (JALPH,NID,IFE)*XIN
            AA(I) = AA(I) + SHPT1(JALPH,NID,IFE)*XIN
            BB(I) = BB(I) + SHPT2(JALPH,NID,IFE)*XIN
 530        CONTINUE
C-----
C-- NSTAR   NORMAL VECTOR
C-- JAC     JACOBIAN OF TRANSFORMATION, ..EQ. MAG OF NORMAL VECTOR
C-----
            NSTAR(1) = AA(2)*BB(3) - AA(3)*BB(2)
            NSTAR(2) = AA(3)*BB(1) - AA(1)*BB(3)
            NSTAR(3) = AA(1)*BB(2) - AA(2)*BB(1)
            JAC = SQRT(NSTAR(1)**2+NSTAR(2)**2+NSTAR(3)**2)
C-----
C-- UTILIZE SYMMETRI
C-----
            NJF=JFMAX(NID)
            IPS2 = .FALSE.
            NPSYM = 1
            IF (PSYM.NE.0) NPSYM = 2
            DO 595 IPSYM = 1,NPSYM
            IF (IPSYM.EQ.2) IPS2 = .TRUE.
C-----
C-- 590 INCREMENT P FIELD POINT NUMBER
C-----
            DO 590 JF=1,NJF
            IR=IIF(NID,JF)
            INTP = .FALSE.
            IF (PSYM.EQ.0) GO TO 535
            IF (XFP(PSYM,IR).EQ.0) INTP = .TRUE.
 535        CONTINUE
            XP(1) = XFP(1,IR)
            XP(2) = XFP(2,IR)
            XP(3) = XFP(3,IR)
            IF (IPS2) XP(PSYM) = -XP(PSYM)
C-----
C-- R       R(P,Q) -- DISTANCE BETWEEN P AND Q
C-- RGRAD(I) DR/DX(I)
C-- DRDN    DR/DN
C-----
            DX(1) = XQ(1) - XP(1)
            DX(2) = XQ(2) - XP(2)
            DX(3) = XQ(3) - XP(3)
            R2 = DX(1)*DX(1) + DX(2)*DX(2) + DX(3)*DX(3)
            R = SQRT(R2)
            RGRAD(1) = DX(1)/R
            RGRAD(2) = DX(2)/R
            RGRAD(3) = DX(3)/R
            DRDN = RGRAD(1)*NSTAR(1) + RGRAD(2)*NSTAR(2) +RGRAD(3)*NSTAR(3)
C-----
C-- EVALUATE THE KERNELS (UKERN1 & UKERN2)
c     IDD . EQ. 1 -- INTERIOR PROBLEM; IDD .NE. 1 -- EXTERIOR PROBLEM
c     ARG       -ikR(P,Q)
c     ARGT      (1+ikR)
c     UKERN1    K1(P,Q = DK2/DN = (DK2/DR) (DR/DN)
c     UKERN2    K2(P,Q) = EXP ( -ikR(P,Q) ) / R(P,Q)
C-----
            ARG = CMPLX(0.,-WN*R)
            UKERN2 = CEXP(ARG)/R
            ARGT = CMPLX(1.,WN*R)
            UKERN1 = -ARGT*CEXP(ARG)*DRDN/R2
            IF (PSYM.EQ.0) GO TO 545
```

```
              IF (IPS2.AND.INTP) GO TO 590
  543         IF (IPS2.OR..NOT.INTP) GO TO 545
              UKERN1 = UKERN1 * 2.
              UKERN2 = UKERN2 * 2.
  545         CONTINUE
              IF (NLN.EQ.6) WTIG=WFPNQT(NID,IFE)*CCR
              IF (NLN.EQ.8) WTIG=WFPNQT(NID,IFE)*4.
              DO 580 JA = 1,8
              IF (NLN.EQ.6.AND.(JA.EQ.2.OR.JA.EQ.7)) GO TO 580
              IC = NODE(JA,K)
              IF (NLN.EQ.6) SHALPH = SHPT(JA,NID,IFE)
              IF (NLN.EQ.8) SHALPH = SHPQ(JA,NID,IFE)
              C(IR,IC) = C(IR,IC) + SHALPH * UKERN1 * WTIG
              D(IR,IC) = D(IR,IC) - SHALPH * UKERN2 * JAC * WTIG
  580         CONTINUE
  590         CONTINUE
  595         CONTINUE
 5100         CONTINUE
 5110         CONTINUE
C-----
C--  590 END OF JF LOOP
C--  595 END OF IPSYM LOOP
C-- 5100 END OF IFE LOOP
C-- 5110 END OF NIDO LOOP
C-----
C-----------------------------------
  603         CONTINUE
  650 CONTINUE
C-----
C-- 600 END OF KSSC LOOP
C-- 650 END OF KSS LOOP
C-----
      IF (ISC.EQ.0) GO TO 1000
      CALL SCATR (X,XCP,EPHI,N,NCP,NPCH,XFP,EPHIF,NFP)
      DO 652 I = 1,NPCH
  652 BTN(I) = BTN(I) + EPHI(I)*PIT4
      DO 653 I = 1,NFP
  653 PFP(I) = PFP(I) + EPHIF(I)*PIT4
 1000 IF (IDD.EQ.1) GO TO 656
      DO 655 L = 1,N
  655 A(L,L) = A(L,L) + PIT4
  656 CONTINUE
C     WRITE (6,9000)
C 9000 FORMAT (/2X,'A')
C     CALL COEMR (A,NPCH,N)
C             WRITE (6,9001)
C 9001 FORMAT (/2X,'B' )
C     CALL COEMR (B,NPCH,N)
C             WRITE (6,9002)
C 9002 FORMAT (/2X,'C')
C     CALL COEMR (C,NFP,N)
C             WRITE (6,9003)
C 9003 FORMAT (/2X,'D')
C     CALL COEMR (D,NFP,N)
C             WRITE (6,9004)
C 9004 FORMAT (/2X,'BTN')
C     CALL COEMR (BTN,NPCH)
C             WRITE (6,9005)
C 9005 FORMAT (/2X,'PFP')
C     CALL COEMR (PFP,NFP)
              RETURN
      END

cc udah betul
C------------------------
C=1=================================================================
      SUBROUTINE PEQ(SHAPQ,SHAPQ1,SHAPQ2,SHAPT,SHAPT1,SHAPT2,WFPQQ,
     1              WFPQT,NGPQ)
C=================================================================
C-----
C-- TO COMPUTE THE SHAPE AND WEIGHTING FUNCTION FOR P.EQ.Q
```

```
C-----
      DIMENSION SHAPQ(8,3,8,100),SHAPQ1(8,3,8,100),SHAPQ2(8,3,8,100),
     1          SHAPT(8,2,8,100),SHAPT1(8,2,8,100),SHAPT2(8,2,8,100),
     2          WFPQQ(8,3,100),WFPQT(8,2,100)
      COMMON/CGAUS/Y(12,12),W(12,12),NGTHET,NGRHO
      COMMON/NGTR/NGRH(8,2,2),NGTH(8,2,2)/SEV/KSS
      PI = 3.141593
      PID2 = PI/2.
      PID4 = PI/4.
      PID6 = PI/6.
      DT = PI/4.
      DT1 = ATAN(2.)
      DT2 = 2.*ATAN(.5)
      DT3 = DT1
      BT1 = - 3.*PI/2.
      BT2 = PI/2.
      ROOT3=SQRT(3.)
      NLN=8
      GO TO 2
    1 NLN=6
    2 CONTINUE
            DO 430 JA = 1,8
            IF (NLN.EQ.6.AND.(JA.EQ.2.OR.JA.EQ.7)) GO TO 430
            RO1 = (23 - NLN)/8
            RO2 = (3 + JA)/4
            KQT = INT(RO1)
            KLN = INT(RO2)
C-----
C-- NGRHO   NUMBER OF EVALUATIONS INI RHO DIRECTION
C-- NGTHET  NUMBER OF EVALUATIONS INI THETA DIRECTION
C-- NGPQ    TOTAL NUMBER OF EVALUATIONS INI POLAR COORDINATE
C--         FOR P.EQ.Q
C-----
            NGRHO = NGRH(KSS,KQT,KLN)
            NGTHET = NGTH(KSS,KQT,KLN)
            NGPQ = NGRHO*NGTHET
            LMAX=2
            IF (NLN.EQ.8.AND.JA.GT.4) LMAX = 3
C-----
C-- INCREMENT SUBDIVISION NUMBER
C-----
            DO 420 L = 1,LMAX
            IPQ=0
C-----
C-- EVALUATE INITIAL VALUE AND INCREMENT OF THETA
C-- BTHETA INITIAL VALUE
C-- DTHETA INCREMENT OF THETA
C-----
            IF (NLN.EQ.8) GO TO 310
            IF (JA.GT.4) GO TO 305
            IF (L.GT.1) GO TO 304
            BTHETA = 0.
            DTHETA = PID6
            GO TO 330
  304       BTHETA = PID6
            DTHETA = PID6
            GO TO 330
  305       IF (L.GT.1) GO TO 306
            BTHETA = 0.
            DTHETA = PID2
            GO TO 330
  306       BTHETA = PID2
            DTHETA = PID2
            GO TO 330
  310       CONTINUE
            IF (JA.LE.4) DTHETA = DT
            IF (JA.LE.4) GO TO 320
            IF (L.EQ.1) DTHETA = DT1
            IF (L.EQ.2) DTHETA = DT2
            IF (L.EQ.3) DTHETA = DT3
  320       CONTINUE
```

```
            BTHETA = BT1 + BT2*JA
            IF (L.GT.1) BTHETA = BTHETA + PID4
            IF (JA.LE.4) GO TO 330
            BTHETA = (JA-4)*PID2
            IF (L.GT.1) BTHETA = BTHETA + DT1
            IF (L.GT.2) BTHETA = BTHETA + DT2
 330        CONTINUE
C-----
C-- INCREMENT THETA NUMBER
C-----
            DO 410 IG2 = 1,NGTHET
            THETA = BTHETA + (1.+Y(NGTHET,IG2))*DTHETA/2.
C-----
C-- EVALUATE INITIAL VALUE AND INCREMENT OF RHO
C-----
            SINT = SIN(THETA)
            COST = COS(THETA)
            IF (NLN.EQ.8) GO TO 335
            IF (JA.GT.4) GO TO 333
            DRHO = 1./COS(THETA-PID6)
            GO TO 340
 333        IF (L.EQ.1) DRHO = 1./(ROOT3*COST + SINT)
            IF (L.EQ.2) DRHO = 1./(SINT - ROOT3*COST)
            GO TO 340
 335        CONTINUE
            IF (JA.GT.4) GO TO 337
            IF (L.EQ.1) DRHO = 2./COS(THETA-BTHETA)
            IF (L.EQ.2) DRHO = 2./COS(BTHETA+PID4-THETA)
            GO TO 340
 337        IF (L.EQ.1) DRHO = 1./COS(THETA-(JA-4)*PID2)
            IF (L.EQ.2) DRHO = 2./COS(THETA-(JA-3)*PID2)
            IF (L.EQ.3) DRHO = 1./COS((JA-2)*PID2-THETA)
 340        CONTINUE
C-----
C-- INCREMENT RHO NUMBER
C-----
            DO 400 IG1 = 1,NGRHO
            RHO = (1.+Y(NGRHO,IG1))*DRHO/2.
            IPQ=IPQ + 1
            IF (NLN.EQ.6) WFPQT(JA,L,IPQ)=W(NGRHO,IG1)*W(NGTHET,IG2)*DRHO*
     1                                          DTHETA*RHO
            IF (NLN.EQ.8) WFPQQ(JA,L,IPQ)=W(NGRHO,IG1)*W(NGTHET,IG2)*DRHO*
     1                                          DTHETA*RHO
C-----
C-- EVALUATE XI COORDINATES
C-----
            IF (NLN.EQ.8) GO TO 343
            Z1 = RHO * SINT
            Z2 = 1.-.5 * RHO * (SINT + ROOT3 * COST)
            Z22 = Z2 - .5
            GO TO (1341,1343,1343,1344,1345,1346,1343,1348),JA
 1341       XI3 = Z1
            XI1 = Z2
            XI2 = 1. - XI1 - XI3
            GO TO 344
 1343       XI1 = Z1
            XI2 = Z2
            XI3 = 1. - XI1 - XI2
            GO TO 344
 1344       XI2 = Z1
            XI3 = Z2
            XI1 = 1. - XI2 - XI3
            GO TO 344
 1345       XI2 = Z1
            XI3 = Z22
            XI1 = 1. - XI2 - XI3
            GO TO 344
 1346       XI3 = Z1
            XI1 = Z22
            XI2 = 1. - XI1 - XI3
            GO TO 344
```

```
 1348       XI1 = Z1
            XI2 = Z22
            XI3 = 1. - XI1 - XI2
            GO TO 344
  343       CONTINUE
            XIP1=RHO*COST
            XIP2=RHO*SINT
            IF (JA.EQ.1.OR.JA.EQ.4.OR.JA.EQ.5) XI1 = XIP1 + 1.
            IF (JA.EQ.6.OR.JA.EQ.8) XI1 = XIP1
            IF (JA.EQ.2.OR.JA.EQ.3.OR.JA.EQ.7) XI1 = XIP1 - 1.
            IF (JA.EQ.1.OR.JA.EQ.2.OR.JA.EQ.6) XI2 = XIP2 + 1.
            IF (JA.EQ.5.OR.JA.EQ.7) XI2 = XIP2
            IF (JA.EQ.3.OR.JA.EQ.4.OR.JA.EQ.8) XI2 = XIP2 - 1.
  344       CONTINUE
C-----
C-- EVALUATE SHAPE FUNCTIONS
C-----
            Y1 = XI1
            Y2 = XI2
            IF (NLN.EQ.6) GO TO 345
            SHAPQ(1,L,JA,IPQ) = .25*(Y1+1)*(Y2+1)*(Y1+Y2-1)
            SHAPQ(2,L,JA,IPQ) = .25*(Y1-1)*(Y2+1)*(Y1-Y2+1)
            SHAPQ(3,L,JA,IPQ) = .25*(-Y1+1)*(Y2-1)*(Y1+Y2+1)
            SHAPQ(4,L,JA,IPQ) = .25*(Y1+1)*(Y2-1)*(-Y1+Y2+1)
            SHAPQ(5,L,JA,IPQ) = .5*(Y1+1)*(1-Y2*Y2)
            SHAPQ(6,L,JA,IPQ) = .5*(Y2+1)*(1-Y1*Y1)
            SHAPQ(7,L,JA,IPQ) = .5*(Y1-1)*(-1+Y2*Y2)
            SHAPQ(8,L,JA,IPQ) = .5*(-Y2+1)*(1-Y1*Y1)
            SHAPQ1(1,L,JA,IPQ) = .25*(Y2+1)*(2*Y1+Y2)
            SHAPQ1(2,L,JA,IPQ) = .25*(Y2+1)*(2*Y1-Y2)
            SHAPQ1(3,L,JA,IPQ) = .25*(Y2-1)*(-2*Y1-Y2)
            SHAPQ1(4,L,JA,IPQ) = .25*(Y2-1)*(-2*Y1+Y2)
            SHAPQ1(5,L,JA,IPQ) = .5*(1-Y2*Y2)
            SHAPQ1(6,L,JA,IPQ) = -Y1*(Y2+1)
            SHAPQ1(7,L,JA,IPQ) = .5*(-1+Y2*Y2)
            SHAPQ1(8,L,JA,IPQ) = -Y1*(-Y2+1)
            SHAPQ2(1,L,JA,IPQ) = .25*(Y1+1)*(Y1+2*Y2)
            SHAPQ2(2,L,JA,IPQ) = .25*(Y1-1)*(Y1-2*Y2)
            SHAPQ2(3,L,JA,IPQ) = .25*(-Y1+1)*(Y1+2*Y2)
            SHAPQ2(4,L,JA,IPQ) = .25*(Y1+1)*(-Y1+2*Y2)
            SHAPQ2(5,L,JA,IPQ) = -Y2*(Y1+1)
            SHAPQ2(6,L,JA,IPQ) = .5*(1-Y1*Y1)
            SHAPQ2(7,L,JA,IPQ) = Y2*(Y1-1)
            SHAPQ2(8,L,JA,IPQ) = -.5*(1-Y1*Y1)
            GO TO 346
  345       CONTINUE
            Y3 = XI3
            SHAPT(1,L,JA,IPQ) = Y1*(2*Y1-1)
            SHAPT(2,L,JA,IPQ) = 0.0
            SHAPT(3,L,JA,IPQ) = Y2*(2*Y2-1)
            SHAPT(4,L,JA,IPQ) = Y3*(2*Y3-1)
            SHAPT(5,L,JA,IPQ) = 4*Y1*Y3
            SHAPT(6,L,JA,IPQ) = 4*Y1*Y2
            SHAPT(7,L,JA,IPQ) = 0.0
            SHAPT(8,L,JA,IPQ) = 4*Y2*Y3
            SHAPT1(1,L,JA,IPQ) = 4*Y1-1
            SHAPT1(2,L,JA,IPQ) = 0.0
            SHAPT1(3,L,JA,IPQ) = 0.
            SHAPT1(4,L,JA,IPQ) = 1-4*Y3
            SHAPT1(5,L,JA,IPQ) = 4*(1-2*Y1-Y2)
            SHAPT1(6,L,JA,IPQ) = 4*Y2
            SHAPT1(7,L,JA,IPQ) = 0.0
            SHAPT1(8,L,JA,IPQ) = -4*Y2
            SHAPT2(1,L,JA,IPQ) = 0.
            SHAPT2(2,L,JA,IPQ) = 0.0
            SHAPT2(3,L,JA,IPQ) = 4*Y2-1
            SHAPT2(4,L,JA,IPQ) = 1-4*Y3
            SHAPT2(5,L,JA,IPQ) = -4*Y1
            SHAPT2(6,L,JA,IPQ) = 4*Y1
            SHAPT2(7,L,JA,IPQ) = 0.0
            SHAPT2(8,L,JA,IPQ) = 4*(1-Y1-2*Y2)
```

```
 346        CONTINUE
 400        CONTINUE
 410        CONTINUE
 420        CONTINUE
 430        CONTINUE
C-----
C-- 400 END OF IG1 LOOP
C-- 410 END OF IG2 LOOP
C-- 420 END OF L LOOP
C-- 430 END 0F JA LOOP
C-----
      IF (NLN.EQ.8) GO TO 1
CINI PROGRAM TMBAHAN DARWIN
C-------------------------------------------------------------------------------
C             DO 1071 L = 1,2
C               DO 1071 I = 1,8
C                         WRITE(6,1078)
C 1078                    FORMAT(/1X,15(1H=),'NILAI VARIABEL SHAPT(1-8,L,I,K)',15(1H=))
C                         WRITE(6,1077)
C 1077                    FORMAT(1X,'L',2X,'I',2X,'K',8X,'1',8X,'2',8X,'3',8X,'4',8X,'5',
C     1                     8X,'6',8X,'7',8X,'8')
C                          DO 1071 K = 1,16
C                          WRITE(6,1072) L,I,K,(SHAPT(JA,L,I,K),JA=1,8)
C 1072 FORMAT (1X,I1,1X,I2,1X,I3,1X,8(1X,F8.5))
C 1071 CONTINUE
C
C             DO 1073 L = 1,2
C               DO 1073 I = 1,8
C                         WRITE(6,1079)
C 1079                    FORMAT(/1X,15(1H=),'NILAI VARIABEL SHAPT1(1-8,L,I,K)',15(1H=))
C                         WRITE(6,1077)
C                         DO 1073 K = 1,16
C                          WRITE(6,1074) L,I,K,(SHAPT1(JA,L,I,K),JA=1,8)
C 1074 FORMAT (1X,I1,1X,I2,1X,I3,1X,8(1X,F8.5))
C 1073 CONTINUE
C
C             DO 1075 L = 1,2
C               DO 1075 I = 1,8
C                         WRITE(6,1081)
C 1081                    FORMAT(/1X,15(1H=),'NILAI VARIABEL SHAPT2(1-8,L,I,K)',15(1H=))
C                         WRITE(6,1077)
C                         DO 1075 K = 1,16
C                          WRITE(6,1076) L,I,K,(SHAPT2(JA,L,I,K),JA=1,8)
C 1076 FORMAT (1X,I1,1X,I2,1X,I3,1X,8(1X,F8.5))
C 1075 CONTINUE
C-------------------------------------------------------------------------------
      RETURN
      END


C=2=================================================================
      SUBROUTINE SCATR (X,XCP,EPHI,N,NCP,NPCH,XFP,EPHIF,NFP)
C=================================================================
C-----
C-- THIS SUBROUTINE IS USED TO SELECT THE INCOMING WAVE EPHI IN THE
C-- SCATTERING PROBLEMS
C-----
      DIMENSION X(3,N),XCP(3,NCP),EPHI(NPCH),XFP(3,NFP),EPHIF(NFP)
      COMPLEX EPHI,EPHIF,IK
      COMMON/OMEGA/WN
      COMMON/SCAT/ISC,AF,BE,GA
      IK = CMPLX(0.0,WN)
      DO 100 I = 1,N
      IF (ISC.EQ.2) GO TO 50
      DIR = AF*X(1,I)+BE*X(2,I)+GA*X(3,I)
      EPHI(I) = CEXP(-IK*DIR)/(IK*415.0)
      GO TO 100
   50 DIR = SQRT( (X(1,I)-AF)**2 + (X(2,I)-BE)**2 + (X(3,I)-GA)**2 )
      EPHI(I) = CEXP(-IK*DIR)/(DIR*IK*415.0)
  100 CONTINUE
C--
```

```
      DO 200 I = 1,NCP
      J = N + I
      IF (ISC.EQ.2) GO TO 150
      DIR = AF*XCP(1,I)+BE*XCP(2,I)+GA*XCP(3,I)
      EPHI(J) = CEXP(-IK*DIR)/(IK*415.0)
      GO TO 200
  150 DIR = SQRT ((XCP(1,I)-AF)**2+(XCP(2,I)-BE)**2+(XCP(3,I)-GA)**2)
      EPHI(J) = CEXP(-IK*DIR)/(DIR*IK*415.0)
  200 CONTINUE
C--
      DO 300 I = 1,NFP
      IF (ISC.EQ.2) GO TO 250
      DIRF = AF*XFP(1,I)+BE*XFP(2,I)+GA*XFP(3,I)
      EPHIF(I) = CEXP(-IK*DIRF)/(IK*415.0)
      GO TO 300
  250 DIRF = SQRT( (XFP(1,I)-AF)**2+(XFP(2,I)-BE)**2+(XFP(3,I)-GA)**2)
      EPHIF(I) = CEXP(-IK*DIRF)/(DIRF*IK*415.0)
  300 CONTINUE
      RETURN
      END
C=2=================================================================
      SUBROUTINE SOLVE (A,B,BTN,C,D,PFP,NFP,NPCH,N,NFPT2,NPCT2,NT2,
     1            PHI,DPHI,AIB,AP)
C=================================================================
C-----
C-- TO FIND BOUNDARY CONDITION
C-----
      DIMENSION A(NPCH,N),B(NPCH,N),C(NFP,N),D(NFP,N),BTN(NPCH),
     1         PFP(NFP),PHI(N),DPHI(N),
     2         G(400,300),AIB(NT2,NT2),AP(NT2,NPCT2),YD(400),
     3         XD(300),V(300,300),SV(300,10),S2(300),S(300)
      COMPLEX A,B,BTN,C,D,PFP,PHI,DPHI,VEL,PRES,Z
      COMMON/OMEGA/WN
C-----
C-- USING EQUATION  [A] {PHI} = {BTN} + [B] {DPHI/DN}
C--            OR  {PHI} = [A+] {BTN} + [A+] [B] {DPHI/DN}
C-- AND   EQUATION  [C] {PHI} + [D] {DPHI/DN} = {PFP}
C--            OR  ([C][A+][B]+[D]) {DPHI/DN} = {PFP} - [C] [A+] {BTN}
C-----
C-- SVD ON [A]
C-----
      WRITE (6,5)
    5 FORMAT(/2X,'SVD ON [A]',/2X)
      IAP = 1
C              CALL SVD (AD,BD,CD,DD,DRM,G,NR2,NC2,NR,NC,NRM,NCM,IAP,
C     1               YD,XD,V,SV,S2,S)
      CALL SVD (A,PHI,BTN,B,AP,G,NPCT2,NT2,NPCH,N,NT2,NPCT2,IAP,
     1         YD,XD,V,SV,S2,S)
C-----
C-- INPUT : A,BTN,B,NPCT2,NT2,NPCH,N,NT2,NPCT2,IAP
C-- OUTPUT: PHI,AP,G,YD,XD,V,SV,S2,S
C-----
C-- NOW {PHI} = [AI] {BTN}
C-- [A+] = GENERAL INVERS OF [A] IN REAL
C-- FIND [AIB] = [A+] [B], [B] IN REAL
C-----
      DO 10 I = 1,NT2
      DO 10 K1 = 1,N
      K2 = N + K1
      AIB(I,K1) = 0.0
      AIB(I,K2) = 0.0
      DO 20 J1 = 1,NPCH
      J2 = NPCH + J1
      AIB(I,K1) = AIB(I,K1) + AP(I,J1) * REAL(B(J1,K1))
     1          + AP(I,J2) * AIMAG(B(J1,K1))
      AIB(I,K2) = AIB(I,K2) - AP(I,J1) * AIMAG(B(J1,K1))
     1          + AP(I,J2) * REAL(B(J1,K1))
   20 CONTINUE
   10 CONTINUE
C-----
C-- FIND {PFP} = {PFP} - [C] {PHI}
```

```
C-- FIND [D] = [D] + [C] [AIB], [AIB] IN REAL
C-----
      SG = -1.0
      CALL MTM (C,PHI,PFP,NFP,1,N,SG)
C-----
C-- SVD ON [D]
C-----
      WRITE (6,30)
   30 FORMAT(/2X,'SVD ON [G]',/2X)
      IAP = 0
C       CALL SVD (AD,BD,CD,DD,DRM,G,NR2,NC2,NR,NC,NRM,NCM,IAP,
C     1                 YD,XD,V,SV,S2,S)
                CALL SVD (D,DPHI,PFP,C,AIB,G,NFPT2,NT2,NFP,N,NT2,NT2,IAP,
     1          YD,XD,V,SV,S2,S)
C-----
C-- FIND {PHI} = [A+] {BTN} + [AIB] {DPHI}
C-- INITIAL VALUE OF {PHI) = [A+] {BTN}
C-----
      DO 50 I1 = 1,N
      I2 = N + I1
      DRE = 0.0
      DIM = 0.0
      DO 40 J1 = 1,N
      J2 = N + J1
      DRE = DRE + AIB(I1,J1) * REAL(DPHI(J1))
     1           + AIB(I1,J2) * AIMAG(DPHI(J1))
      DIM = DIM + AIB(I2,J1) * REAL(DPHI(J1))
     1           + AIB(I2,J2) * AIMAG(DPHI(J1))
   40 CONTINUE
      PHI(I1) = PHI(I1) + CMPLX(DRE,DIM)
   50 CONTINUE
C--
      WRITE (6,317)
  317 FORMAT (//2X,10(1H-),'BOUNDARY CONDITION',10(1H-),/2X)
C--
      WRITE (6,318)
  318 FORMAT (2X,'NODE',5X,'VELOCITY POTENTIAL',14X,'PRESSURE',13X,
     1       'VELOCITY',16X,'IMPEDANCE')
      DO 320 I = 1,N
      PRES = CMPLX(0.0,WN) * 415.0 * PHI(I)
      VEL = -1.0 * DPHI(I)
      Z = PRES / VEL
      WRITE (6,319) I,PHI(I),PRES,VEL,Z
  319 FORMAT (3X,I3,2X,2(F12.6,1X,F12.6,2X),F8.5,1X,F8.5,2X,
     1       G14.8,1X,G14.8)
  320 CONTINUE
                RETURN
      END


C=====================================================================
      SUBROUTINE SVD (AD,BD,CD,DD,DRM,G,NR2,NC2,NR,NC,NRM,NCM,IAP,
     1               YD,XD,V,SV,S2,S)
C=====================================================================
C-----
C-- TO SOLVE [AD] {BD} = {CD}
C-----
      DIMENSION AD(NR,NC),BD(NC),CD(NR),DD(NR,NC),DRM(NRM,NCM),
     1G(NR2,NC2),YD(NR2),XD(NC2),V(NC2,NC2),SV(NC2,NC2),S2(NC2),
     2S(NC2)
      COMPLEX AD,BD,CD,DD
C-----
C-- CHANGE TO REAL
C-----
                IAO=0
      DO 5 I1 = 1,NR
      I2 = NR + I1
      YD(I1) = REAL(CD(I1))
      YD(I2) = AIMAG(CD(I1))
      DO 5 J1 = 1,NC
      J2 = NC + J1
```

```
      G(I1,J1) = REAL(AD(I1,J1))
      G(I1,J2) = -AIMAG(AD(I1,J1))
      G(I2,J1) = AIMAG(AD(I1,J1))
      G(I2,J2) = REAL(AD(I1,J1))
    5 CONTINUE
      IF (IAP.EQ.1) GO TO 25
C-----
C-- NOW [G] IS [AD] IN REAL
C-- FIND [G] = [G] + [DD] {DRM}
C-----
      DO 10 I1 =1,NR
      I2 = NR + I1
      DO 10 K = 1,NC2
      DO 20 J1 = 1,NC
      J2 = NC + J1
      G(I1,K) = G(I1,K) + REAL(DD(I1,J1))*DRM(J1,K)
     1            - AIMAG(DD(I1,J1))*DRM(J2,K)
      G(I2,K) = G(I2,K) + AIMAG(DD(I1,J1))*DRM(J1,K)
     1           + REAL(DD(I1,J1))*DRM(J2,K)
   20 CONTINUE
   10 CONTINUE
C-----
C-- NOW WE HAVE [G] [XD] = [YD]
C-- INPUT : G,YD,NR2,NC2
C-- OUTPUT: XD,V,S2,S,NRD
C-----

   25 CALL SVDSOL (G,XD,YD,V,S2,S,NR2,NC2,NRD)
      IF (NRD.EQ.0) GO TO 40
C-----
C-- PRINT SINGULAR VECTORS OF [G]
C-----
c      WRITE (6,30)
c    30 FORMAT (/2X,' SINGULAR VECTORS ')
c      DO 33 I = 1,NC2
c      DO 33 J = 1,NRD
c      K = NC2 - NRD + J
c      SV(I,J) = V(I,K)
c   33 CONTINUE
c      CALL COEMR (SV,NC2,NRD)
c      IF (IAP.EQ.1) GO TO 39
c      WRITE (6,35)
   35 FORMAT (/2X,'[A+] [B] IN REAL')
      CALL COEMR (DRM,NRM,NCM)
c       WRITE (6,37)
c   37 FORMAT (/2X,'USE EXEQ.F TO FIND EXTRA EQUATIONS',/2X)
c   39 STOP
C-----
C-- CONTINUE
C-----
   40 DO 45 I1 = 1,NC
      I2 = NC + I1
      BD(I1) = CMPLX(XD(I1),XD(I2))
c               WRITE (6,44)
c               FORMAT (/2X,'[A+] [B] IN REAL')
c     CALL COEMR (DRM,NRM,NCM)
c perintah cetak A
C   44 FORMAT (/2X,'[A]  IN REAL')
C      CALL COEMR (AD,NR,NC)
c   44         FORMAT (/2X,'[C]  IN REAL')
c      CALL COEMR (CD,NR,NR)
c===============
   45 CONTINUE
C               IAP=1
C       call coem (bd,nc,1)
      IF (IAP.NE.1) GO TO 60
C-----
C-- FIND GENERAL INVERS OF [G] = [DRM]
C-----
C       call coemr (g,nr2,nc2)
C       call coemr (v,nc2,nc2)
```

```
C       call coemr (s2,nc2,1)
      DO 50 I = 1,NC2
      DO 52 J = 1,NR2
      DRM(I,J) = 0.0
      DO 54 K = 1,NC2
      DRM(I,J) = DRM(I,J) + V(I,K) * G(J,K) / S2(K)
   54 CONTINUE
   52 CONTINUE
   50 CONTINUE
   60 RETURN
      END
C=======================================================================
      SUBROUTINE SVDSOL (US,XD,YD,VD,S2D,SD,NROW,NCOL,NRD)
C=======================================================================
      DIMENSION US(NROW,NCOL),XD(NCOL),YD(NROW),VD(NCOL,NCOL),SD(NCOL),
     1          S2D(NCOL)
      INTEGER ECR,SLIMIT
      COMMON/MAT/EPS,SVDQ,MSVD
      COMMON/IDEN/IDD
C-----
C-- FIND [US], [V], AND {S2}
C-----
C       call coemr(us,nrow,ncol)
C       call coemr(yd,nrow,1)
      SLIMIT = INT(NCOL/4)
      IF(SLIMIT.LT.6) SLIMIT = 6
      NSWEEP = 0
      E2 = 10.0 * NROW * EPS * EPS
      TOL = EPS * 0.1
      ECR = NCOL
C-----
C-- SET [V] As [I]
C-----
      DO 20 I = 1,NCOL
      DO 20 J = 1,NCOL
      VD(I,J) = 0.0
      VD(I,I) = 1.0
   20 CONTINUE
C-----
C-- START CALCULATE SVD
C-----
   25 NROT = ECR * (ECR-1)/2
      NSWEEP = NSWEEP + 1
      DO 100 J = 1,ECR-1
      DO 100 K = J+1,ECR
      P = 0.0
      Q = 0.0
      R = 0.0
      DO 30 I = 1,NROW
      X0 = US(I,J)
      Y0 = US(I,K)
      P = P + X0*Y0
      Q = Q + X0*X0
      R = R + Y0*Y0
   30 CONTINUE
      S2D(J) = Q
      S2D(K) = R
      IF (Q.LT.R) GO TO 70
      IF (Q.LE.E2*S2D(1).OR.ABS(P).LE.TOL*Q) GO TO 50
      P = P/Q
      R = 1 - R/Q
      VT = SQRT(4*P*P+R*R)
      CO = SQRT(0.5*(1+R/VT))
      SO = P/(VT*CO)
      DO 40 I = 1,NROW
      D1 = US(I,J)
      US(I,J) = CO*D1 + SO*US(I,K)
      US(I,K) = -SO*D1 + CO*US(I,K)
   40 CONTINUE
      DO 45 I = 1,NCOL
      D1 = VD(I,J)
```

```
      VD(I,J) = CO*D1 + SO*VD(I,K)
      VD(I,K) = -SO*D1 + CO*VD(I,K)
   45 CONTINUE
      GO TO 60
   50 NROT = NROT - 1
   60 GO TO 90
   70 P = P/R
      Q = Q/R - 1
      VT = SQRT(4*P*P+Q*Q)
      SO = SQRT(0.5*(1-Q/VT))
      IF(P.LT.0) SO = -SO
      CO = P/(VT*SO)
      DO 81 I = 1,NROW
      D1 = US(I,J)
      US(I,J) = CO*D1 + SO*US(I,K)
      US(I,K) = -SO*D1 + CO*US(I,K)
   81 CONTINUE
      DO 85 I = 1,NCOL
      D1 = VD(I,J)
      VD(I,J) = CO*D1 + SO*VD(I,K)
      VD(I,K) = -SO*D1 + CO*VD(I,K)
   85 CONTINUE
   90 CONTINUE
  100 CONTINUE
      WRITE(6,105) NSWEEP,NROT
  105 FORMAT (2X,'END OF SWEEP #',I2,' NO OF ROTATION',
     1        ' PERFORMED : ',I4)
  110 IF(ECR.LT.3.OR.S2D(ECR).GT.(S2D(1)*TOL+TOL*TOL)) GO TO 120
      ECR = ECR - 1
      GO TO 110
  120 CONTINUE
      IF(NROT.NE.0.AND.NSWEEP.LE.SLIMIT) GO TO 25
  130 CONTINUE
      IF (NSWEEP.GT.SLIMIT) WRITE (6,140)
  140 FORMAT (/2X,'SWEEP LIMIT EXCEEDED',/2X)
C-----
C-- END OF SVD CALCULATION
C-----
      WRITE (6,143) EPS
  143 FORMAT (/2X,'TOLERANCE : ',F12.10)
      IF (MSVD-1) 180,160,170
  160 WRITE (6,161)
  161 FORMAT (/2X,'[U] [S]')
      CALL COEMR (US,NROW,NCOL)
      GO TO 180
  170 WRITE (6,171)
  171 FORMAT (/2X,'[V]')
      CALL COEMR (VD,NCOL,NCOL)
  180 WRITE (6,181)
  181 FORMAT(/2X,'SINGULAR VALUE')
      DO 185 I = 1,NCOL
  185 SD(I) = SQRT(S2D(I))
      CALL COEMR (SD,NCOL,1)
      COND = SD(1)/SD(NCOL)
      WRITE (6,187) COND
  187 FORMAT(/2X,'CONDITION NUMBER : ',F14.6)
C-----
c-- IF INTERIOR CASE, PERFORMED EFI METHOD
C-----
C     IF (IDD.EQ.1) CALL EFI (US,S2D,NROW,NCOL)
C-----
C-- FIND RANK DEFICIENT
C-- TOLERANCE : SMIN * 15 > SMAX
C-----
C     call coemr(v,ncol,ncol)
C     call coemr(s2d,ncol,1)
C     call coemr(us,nrow,ncol)
C     TOLQ = SVDQ * SVDQ
C     Q = S2D(1)/TOLQ
C     NRD = 0
C     DO 190 I = 1,NCOL
```

```
C      IF (S2D(I).LE.Q) NRD = NRD + 1
C  190 CONTINUE
C      IF (NRD.EQ.0) GO TO 200
C      WRITE (6,195) NRD
C  195 FORMAT (/2X,'RANK DEFICIENT: ',I3,' NO UNIQUE SOLUTION EXIST')
C      GO TO 300
C-----
C-- START LEAST SQUARES SOLUTION
C-----
                ALP=0.9
  200 DO 220 I = 1,NCOL
      XS = 0.0
      DO 210 J = 1,NCOL
      DO 210 K = 1,NROW
      XS = XS + VD(I,J)*US(K,J)*YD(K)/S2D(J)
C               XS=XS+(S2D(J)*VD(I,J)*US(K,J)*YD(K))/(S2D(J)*(S2D(J)+ALP))
  210 CONTINUE
      XD(I) = XS
  220 CONTINUE
  300 RETURN
      END
C=1====================================================================
      SUBROUTINE EFI (US,S2D,NROW,NCOL)
C======================================================================
C-----
C-- TO CALCULATE THE MAGNITUDE OF ROW VECTORS [U]
C-----
      DIMENSION US(NROW,NCOL),S2D(NCOL)
      WRITE (6,5)
    5 FORMAT (/2X,'EFFECTIVE INDEPENDENCE METHOD WAS PERFORMED',
     1       /2X,'ROW',6X,'EFI')
      DO 10 I = 1,NROW
      SUM = 0.0
      DO 20 J = 1,NCOL
      SUM = SUM + US(I,J)*US(I,J)/S2D(J)
   20 CONTINUE
      WRITE (6,30) I,SUM
   30 FORMAT (2X,I3,2X,F10.6)
   10 CONTINUE
      RETURN
      END
C======================================================================
      SUBROUTINE MTM (AD,BD,CD,NROW,NCOL,ND,SG)
C======================================================================
C-----
C-- TO CALCULATE [CD] = [CD] + [AD] [BD]
C-- THEY CAN BE A VECTOR
C-----
      DIMENSION AD(NROW,ND),BD(ND,NCOL),CD(NROW,NCOL)
      COMPLEX AD,BD,CD
C--
      DO 10 I = 1,NROW
      DO 10 J = 1,NCOL
      DO 10 K = 1,ND
      CD(I,J) = CD(I,J) + SG * AD(I,K) * BD(K,J)
   10 CONTINUE
      RETURN
      END
C=1====================================================================
      SUBROUTINE COEM (DM,NROW,NCOL)
C======================================================================
C-----
C-- TO PRINT MATRIX COEFICIENT
C-----
      DIMENSION DM(NROW,NCOL)
      COMPLEX DM
      JB = 1
      JE = 5
   10 IF (JE.GT.NCOL) JE = NCOL
      WRITE (6,20) (J,J = JB,JE)
   20 FORMAT(/5X,5(13X,I3,11X),/2X)
```

```
      DO 30 I = 1,NROW
   30 WRITE(6,40) I,(DM(I,L),L = JB,JE)
   40 FORMAT(2X,I3,5(2X,G12.6,1X,G12.6))
      IF (JE.EQ.NCOL) GO TO 50
      JB = JE + 1
      JE = JB + 4
      GO TO 10
   50 RETURN
      END
C=1=================================================================
      SUBROUTINE COEMR (DM,NROW,NCOL)
C===================================================================
C-----
C-- TO PRINT MATRIX COEFICIENT
C-----
      DIMENSION DM(NROW,NCOL)
      IF (NCOL.EQ.1) GO TO 50
      JB = 1
      JE = 10
   10 IF (JE.GT.NCOL) JE = NCOL
      WRITE (6,20) (J,J = JB,JE)
   20 FORMAT(/3X,10(6X,I3,4X))
      DO 30 I = 1,NROW
   30 WRITE(6,40) I,(DM(I,L),L = JB,JE)
   40 FORMAT(I3,10(2X,F11.6))
      IF (JE.EQ.NCOL) GO TO 80
      JB = JE + 1
      JE = JB + 9
      GO TO 10
   50 JB = 1
      JE = 7
   60 IF (JE.GT.NROW) JE = NROW
      WRITE (6,70) (I,DM(I,1),I = JB,JE)
   70 FORMAT (8(2X,I3,1X,G12.6,'|'))
      IF (JE.EQ.NROW) GO TO 80
      JB = JE + 1
      JE = JB + 6
      GO TO 60
   80 RETURN
      END
C-------------------------------------------------------------------------------
C-TAMBAHAN DARWIN-------------------------------------------------------------------------
C-------------------------------------------------------------------------------
C=====================================================================
      SUBROUTINE SVDT (AD,BD,CD,DD,DRM,G,NR2,NC2,NR,NC,NRM,NCM,IAP,
     1              YD,XD,V,SV,S2,S)
C=====================================================================
C-----
C-- TO SOLVE [AD] {BD} = {CD}
C-----
      DIMENSION AD(NR,NC),BD(NC),CD(NR),DD(NR,NC),DRM(NRM,NCM),
     1G(NR2,NC2),YD(NR2),XD(NC2),V(NC2,NC2),SV(NC2,10),S2(NC2),
     2S(NC2)
      COMPLEX AD,BD,CD,DD
C-----
C-- CHANGE TO REAL
C-----
      DO 5 I1 = 1,NR
      I2 = NR + I1
      YD(I1) = REAL(CD(I1))
      YD(I2) = AIMAG(CD(I1))
      DO 5 J1 = 1,NC
      J2 = NC + J1
      G(I1,J1) = REAL(AD(I1,J1))
      G(I1,J2) = -AIMAG(AD(I1,J1))
      G(I2,J1) = AIMAG(AD(I1,J1))
      G(I2,J2) = REAL(AD(I1,J1))
    5 CONTINUE
      IF (IAP.EQ.1) GO TO 25
C-----
C-- NOW [G] IS [AD] IN REAL
```

```
C-- FIND [G] = [G] + [DD] {DRM}
C-----
      DO 10 I1 =1,NR
      I2 = NR + I1
      DO 10 K = 1,NC2
      DO 20 J1 = 1,NC
      J2 = NC + J1
      G(I1,K) = G(I1,K) + REAL(DD(I1,J1))*DRM(J1,K)
     1            - AIMAG(DD(I1,J1))*DRM(J2,K)
      G(I2,K) = G(I2,K) + AIMAG(DD(I1,J1))*DRM(J1,K)
     1           + REAL(DD(I1,J1))*DRM(J2,K)
   20 CONTINUE
   10 CONTINUE
C-----
C-- NOW WE HAVE [G] [XD] = [YD]
C-- INPUT : G,YD,NR2,NC2
C-- OUTPUT: XD,V,S2,S,NRD
C-----
   25 CALL SVDSOL (G,XD,YD,V,S2,S,NR2,NC2,NRD)
C-----
C-- SEKARANG SUDAH DIDAPAT G,XD,YD, CARI ALPHA!
C-- INPUT : G,XD,YD,NCOL,NROW
C-- OUTPUT: ALP
C-----
c              CALL ALPHA (G,XD,YD,ALP,NR2,NC2)
c              IF (NRD.EQ.0) GO TO 40
C-----
C-- PRINT SINGULAR VECTORS OF [G]
C-----
      WRITE (6,30)
   30 FORMAT (/2X,' SINGULAR VECTORS ')
      DO 33 I = 1,NC2
      DO 33 J = 1,NRD
      K = NC2 - NRD + J
      SV(I,J) = V(I,K)
   33 CONTINUE
      CALL COEMR (SV,NC2,NRD)
      IF (IAP.EQ.1) GO TO 39
      WRITE (6,35)
   35 FORMAT (/2X,'[A+] [B] IN REAL')
      CALL COEMR (DRM,NRM,NCM)
      WRITE (6,37)
   37 FORMAT (/2X,'USE EXEQ.F TO FIND EXTRA EQUATIONS',/2X)
   39 STOP
C-----
C-- CONTINUE
C-----
   40 DO 45 I1 = 1,NC
      I2 = NC + I1
      BD(I1) = CMPLX(XD(I1),XD(I2))
   45 CONTINUE
C       call coem (bd,nc,1)
      IF (IAP.NE.1) GO TO 60
C-----
C-- FIND GENERAL INVERS OF [G] = [DRM]
C-----
C       call coemr (g,nr2,nc2)
C       call coemr (v,nc2,nc2)
C       call coemr (s2,nc2,1)
      DO 50 I = 1,NC2
      DO 52 J = 1,NR2
      DRM(I,J) = 0.0
      DO 54 K = 1,NC2
      DRM(I,J) = DRM(I,J) + V(I,K) * G(J,K) / S2(K)
   54 CONTINUE
   52 CONTINUE
   50 CONTINUE
   60 RETURN
      END
```

LAMPIRAN B

HASIL ITERASI METODE STEEPEST DESCENT

Kasus 1
Hasil Iterasi Steepest Descent R=1.1m; k = 1

	Iterasi 1			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	206.01334	208.51346	293.12004	0.75%	0.49%	0.13%
2	207.32369	208.78591	294.23574	0.12%	0.62%	0.25%
3	208.41460	209.43949	295.46835	0.40%	0.93%	0.67%
4	207.32369	208.78591	294.23574	0.12%	0.62%	0.25%
5	206.01334	208.51346	293.12004	0.75%	0.49%	0.13%
6	204.39142	205.08487	289.54388	1.54%	1.16%	1.35%
7	204.07508	207.34064	290.92401	1.69%	0.08%	0.88%
8	204.39142	205.08487	289.54388	1.54%	1.16%	1.35%
9	206.86519	208.99710	294.06291	0.34%	0.72%	0.19%
10	207.78956	209.31390	294.93866	0.10%	0.87%	0.49%
11	207.78956	209.31390	294.93866	0.10%	0.87%	0.49%
12	206.80792	208.79338	293.87785	0.37%	0.62%	0.13%
13	205.18741	207.30855	291.68255	1.15%	0.09%	0.62%
14	204.53310	207.06777	291.05129	1.47%	0.21%	0.84%
15	204.53310	207.06777	291.05129	1.47%	0.21%	0.84%
16	205.57787	207.60010	292.16445	0.96%	0.05%	0.46%
17	206.32509	208.03182	292.99707	0.60%	0.26%	0.17%
18	206.96249	208.56534	293.82473	0.30%	0.51%	0.11%
19	207.32369	208.78591	294.23574	0.12%	0.62%	0.25%
20	206.96249	208.56534	293.82473	0.30%	0.51%	0.11%
21	206.32509	208.03182	292.99707	0.60%	0.26%	0.17%
22	204.53633	205.72266	290.09813	1.47%	0.86%	1.16%
23	204.39142	205.08487	289.54388	1.54%	1.16%	1.35%
24	204.53633	205.72266	290.09813	1.47%	0.86%	1.16%
25	206.80792	208.79338	293.87785	0.37%	0.62%	0.13%
26	206.86519	208.99710	294.06291	0.34%	0.72%	0.19%
27	205.57787	207.60010	292.16445	0.96%	0.05%	0.46%
28	205.18741	207.30855	291.68255	1.15%	0.09%	0.62%
29	206.01334	208.51346	293.12004	0.75%	0.49%	0.13%
30	206.80792	208.79338	293.87785	0.37%	0.62%	0.13%
31	207.78956	209.31390	294.93866	0.10%	0.87%	0.49%
32	207.78956	209.31390	294.93866	0.10%	0.87%	0.49%
33	206.86519	208.99710	294.06291	0.34%	0.72%	0.19%
34	205.57787	207.60010	292.16445	0.96%	0.05%	0.46%
35	204.53310	207.06777	291.05129	1.47%	0.21%	0.84%
36	204.53310	207.06777	291.05129	1.47%	0.21%	0.84%
37	205.18741	207.30855	291.68255	1.15%	0.09%	0.62%
38	206.32509	208.03182	292.99707	0.60%	0.26%	0.17%
39	206.96249	208.56534	293.82473	0.30%	0.51%	0.11%
40	207.32369	208.78591	294.23574	0.12%	0.62%	0.25%
41	206.96249	208.56534	293.82473	0.30%	0.51%	0.11%
42	206.32509	208.03182	292.99707	0.60%	0.26%	0.17%
43	204.53633	205.72266	290.09813	1.47%	0.86%	1.16%
44	204.39142	205.08487	289.54388	1.54%	1.16%	1.35%
45	204.53633	205.72266	290.09813	1.47%	0.86%	1.16%

46	206.86519	208.99710	294.06291	0.34%	0.72%	0.19%
47	206.80792	208.79338	293.87785	0.37%	0.62%	0.13%
48	205.18741	207.30855	291.68255	1.15%	0.09%	0.62%
49	205.57787	207.60010	292.16445	0.96%	0.05%	0.46%
50	206.01334	208.51346	293.12004	0.75%	0.49%	0.13%
			Rata-rata:	0.78%	0.54%	0.50%

Iterasi 2				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.97581	207.97753	292.71264	0.77%	0.23%	0.27%
2	206.28338	208.58053	293.35758	0.62%	0.52%	0.05%
3	206.67153	208.33954	293.45951	0.44%	0.40%	0.02%
4	206.28362	208.58054	293.35776	0.62%	0.52%	0.05%
5	205.97663	207.97789	292.71346	0.77%	0.23%	0.27%
6	205.59016	206.14690	291.14234	0.96%	0.65%	0.81%
7	205.67966	207.59070	292.22939	0.92%	0.04%	0.43%
8	205.58996	206.14686	291.14216	0.96%	0.65%	0.81%
9	206.47790	208.82505	293.66822	0.53%	0.64%	0.06%
10	206.48927	208.90493	293.73302	0.53%	0.68%	0.08%
11	206.48931	208.90494	293.73306	0.53%	0.68%	0.08%
12	206.41614	208.65557	293.50429	0.56%	0.56%	0.00%
13	205.86749	207.80442	292.51342	0.82%	0.15%	0.34%
14	206.09702	207.97049	292.79294	0.71%	0.23%	0.24%
15	206.09760	207.97161	292.79414	0.71%	0.23%	0.24%
16	206.20527	208.04682	292.92335	0.66%	0.26%	0.20%
17	206.37410	208.24789	293.18501	0.58%	0.36%	0.11%
18	206.34749	208.60146	293.41754	0.59%	0.53%	0.03%
19	206.28401	208.58044	293.35796	0.62%	0.52%	0.05%
20	206.34762	208.60148	293.41765	0.59%	0.53%	0.03%
21	206.37450	208.24820	293.18551	0.58%	0.36%	0.11%
22	205.80142	206.78072	291.74045	0.86%	0.35%	0.60%
23	205.58996	206.14672	291.14206	0.96%	0.65%	0.81%
24	205.80127	206.78072	291.74035	0.86%	0.35%	0.60%
25	206.41406	208.65473	293.50223	0.56%	0.56%	0.00%
26	206.47636	208.82436	293.66665	0.53%	0.64%	0.05%
27	206.20361	208.04615	292.92172	0.66%	0.26%	0.20%
28	205.86469	207.80247	292.51006	0.83%	0.15%	0.34%
29	205.97568	207.97727	292.71236	0.77%	0.23%	0.27%
30	206.41272	208.65481	293.50135	0.56%	0.56%	0.00%
31	206.48629	208.90429	293.73048	0.53%	0.68%	0.08%
32	206.48634	208.90432	293.73053	0.53%	0.68%	0.08%
33	206.47545	208.82447	293.66608	0.53%	0.64%	0.05%
34	206.20471	208.04670	292.92288	0.66%	0.26%	0.20%
35	206.09443	207.96968	292.79055	0.72%	0.23%	0.24%
36	206.09607	207.97022	292.79208	0.71%	0.23%	0.24%
37	205.86367	207.80241	292.50931	0.83%	0.15%	0.34%
38	206.37183	208.24763	293.18323	0.58%	0.36%	0.11%
39	206.34355	208.60276	293.41570	0.60%	0.53%	0.03%
40	206.28168	208.58023	293.35617	0.63%	0.52%	0.05%
41	206.34375	208.60275	293.41584	0.60%	0.53%	0.03%
42	206.37262	208.24774	293.18387	0.58%	0.36%	0.11%

43	205.79829	206.78160	291.73886	0.86%	0.35%	0.60%
44	205.58818	206.14618	291.14043	0.96%	0.65%	0.81%
45	205.79805	206.78160	291.73870	0.86%	0.35%	0.60%
46	206.47416	208.82436	293.66510	0.53%	0.64%	0.05%
47	206.41218	208.65474	293.50091	0.56%	0.56%	0.00%
48	205.86313	207.80229	292.50884	0.83%	0.15%	0.34%
49	206.20171	208.04597	292.92025	0.66%	0.26%	0.20%
50	205.97417	207.97721	292.71126	0.77%	0.23%	0.27%
			Rata-rata:	0.68%	0.42%	0.23%

	Iterasi 3			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.67397	207.38114	292.07656	0.92%	0.06%	0.49%
2	206.92308	208.89883	294.03381	0.32%	0.67%	0.18%
3	207.59425	208.41081	294.16056	0.01%	0.44%	0.22%
4	206.92288	208.89874	294.03361	0.32%	0.67%	0.18%
5	205.67428	207.38128	292.07688	0.92%	0.06%	0.49%
6	204.46147	205.66042	290.00121	1.50%	0.89%	1.19%
7	204.15262	206.28736	290.22882	1.65%	0.58%	1.12%
8	204.46169	205.66046	290.00140	1.50%	0.89%	1.19%
9	206.66044	208.80988	293.78581	0.44%	0.63%	0.10%
10	207.39357	209.29177	294.64408	0.09%	0.86%	0.39%
11	207.39340	209.29174	294.64395	0.09%	0.86%	0.39%
12	206.59471	208.66259	293.63489	0.47%	0.56%	0.04%
13	205.27080	207.45167	291.84293	1.11%	0.02%	0.57%
14	204.78085	207.18903	291.31167	1.35%	0.15%	0.75%
15	204.78196	207.19084	291.31374	1.35%	0.15%	0.75%
16	205.58037	207.66626	292.21322	0.96%	0.08%	0.44%
17	206.10005	208.08654	292.87751	0.71%	0.28%	0.21%
18	206.95965	208.95661	294.10060	0.30%	0.70%	0.20%
19	206.92241	208.89866	294.03322	0.32%	0.67%	0.18%
20	206.95945	208.95652	294.10039	0.30%	0.70%	0.20%
21	206.10014	208.08672	292.87770	0.71%	0.28%	0.21%
22	205.00825	206.45181	290.94799	1.24%	0.51%	0.87%
23	204.46048	205.66033	290.00045	1.50%	0.89%	1.19%
24	205.00843	206.45190	290.94818	1.24%	0.51%	0.87%
25	206.59121	208.66175	293.63183	0.48%	0.56%	0.04%
26	206.65685	208.80890	293.78259	0.44%	0.63%	0.09%
27	205.57673	207.66536	292.21001	0.97%	0.08%	0.44%
28	205.26631	207.44909	291.83794	1.11%	0.02%	0.57%
29	205.67205	207.38102	292.07513	0.92%	0.06%	0.49%
30	206.59178	208.66204	293.63244	0.48%	0.56%	0.04%
31	207.39066	209.29110	294.64156	0.09%	0.86%	0.39%
32	207.39047	209.29111	294.64144	0.09%	0.86%	0.39%
33	206.65742	208.80905	293.78310	0.44%	0.63%	0.09%
34	205.58022	207.66622	292.21308	0.96%	0.08%	0.44%
35	204.77813	207.18813	291.30912	1.35%	0.15%	0.75%
36	204.78097	207.18905	291.31177	1.35%	0.15%	0.75%
37	205.26708	207.44913	291.83851	1.11%	0.02%	0.57%
38	206.09988	208.08682	292.87759	0.71%	0.28%	0.21%
39	206.95638	208.95945	294.10031	0.30%	0.70%	0.20%

40	206.92231	208.89900	294.03339	0.32%	0.67%	0.18%
41	206.95613	208.95935	294.10006	0.30%	0.70%	0.20%
42	206.10028	208.08673	292.87781	0.71%	0.28%	0.21%
43	205.00562	206.45405	290.94773	1.24%	0.50%	0.87%
44	204.46060	205.66022	290.00046	1.50%	0.89%	1.19%
45	205.00574	206.45416	290.94789	1.24%	0.50%	0.87%
46	206.65771	208.80961	293.78370	0.44%	0.63%	0.09%
47	206.59200	208.66230	293.63279	0.48%	0.56%	0.04%
48	205.26727	207.44938	291.83882	1.11%	0.02%	0.57%
49	205.57771	207.66582	292.21104	0.96%	0.08%	0.44%
50	205.67382	207.38147	292.07669	0.92%	0.06%	0.49%
			Rata-rata:	0.79%	0.45%	0.46%

Iterasi 4				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.88129	206.92007	291.89556	0.82%	0.28%	0.55%
2	206.75617	208.45324	293.59984	0.40%	0.46%	0.03%
3	207.07962	207.48659	293.14272	0.24%	0.01%	0.12%
4	206.75615	208.45329	293.59987	0.40%	0.46%	0.03%
5	205.88181	206.92022	291.89604	0.82%	0.28%	0.55%
6	205.30025	205.93050	290.78439	1.10%	0.76%	0.93%
7	205.08502	206.21357	290.83312	1.20%	0.62%	0.91%
8	205.30030	205.93040	290.78436	1.10%	0.76%	0.93%
9	206.76537	208.49333	293.63478	0.39%	0.48%	0.04%
10	207.12545	208.72668	294.05404	0.22%	0.59%	0.19%
11	207.12536	208.72674	294.05402	0.22%	0.59%	0.19%
12	206.70099	208.36120	293.49564	0.42%	0.42%	0.00%
13	205.87459	207.47472	292.28429	0.82%	0.01%	0.42%
14	205.76972	207.40734	292.16260	0.87%	0.04%	0.46%
15	205.77112	207.40954	292.16514	0.87%	0.04%	0.46%
16	206.15773	207.67135	292.62331	0.69%	0.08%	0.30%
17	206.40323	207.95756	292.99939	0.57%	0.22%	0.17%
18	207.02246	208.64433	293.92304	0.27%	0.55%	0.14%
19	206.75614	208.45341	293.59994	0.40%	0.46%	0.03%
20	207.02239	208.64431	293.92298	0.27%	0.55%	0.14%
21	206.40353	207.95775	292.99974	0.57%	0.22%	0.17%
22	205.91960	206.69350	291.76203	0.80%	0.39%	0.59%
23	205.29983	205.93066	290.78421	1.10%	0.76%	0.93%
24	205.91967	206.69351	291.76209	0.80%	0.39%	0.59%
25	206.69714	208.36056	293.49248	0.43%	0.41%	0.00%
26	206.76173	208.49262	293.63172	0.39%	0.48%	0.04%
27	206.15410	207.67075	292.62032	0.69%	0.08%	0.30%
28	205.86946	207.47189	292.27867	0.82%	0.01%	0.42%
29	205.88049	206.92062	291.89539	0.82%	0.28%	0.55%
30	206.69671	208.36045	293.49209	0.43%	0.41%	0.00%
31	207.12143	208.72583	294.05061	0.22%	0.59%	0.19%
32	207.12131	208.72596	294.05061	0.22%	0.59%	0.19%
33	206.76134	208.49244	293.63132	0.39%	0.48%	0.04%
34	206.15737	207.67136	292.62306	0.69%	0.08%	0.30%
35	205.76575	207.40634	292.15909	0.87%	0.05%	0.46%
36	205.76938	207.40728	292.16231	0.87%	0.04%	0.46%

37	205.86910	207.47152	292.27815	0.82%	0.01%	0.42%
38	206.40228	207.95763	292.99877	0.57%	0.22%	0.17%
39	207.01785	208.64819	293.92254	0.27%	0.55%	0.14%
40	206.75533	208.45347	293.59941	0.40%	0.46%	0.03%
41	207.01767	208.64823	293.92244	0.27%	0.55%	0.14%
42	206.40279	207.95756	292.99907	0.57%	0.22%	0.17%
43	205.91547	206.69678	291.76144	0.80%	0.39%	0.59%
44	205.29901	205.93038	290.78343	1.10%	0.76%	0.93%
45	205.91548	206.69679	291.76146	0.80%	0.39%	0.59%
46	206.76157	208.49285	293.63177	0.39%	0.48%	0.04%
47	206.69704	208.36069	293.49249	0.43%	0.41%	0.00%
48	205.86939	207.47181	292.27856	0.82%	0.01%	0.42%
49	206.15392	207.67079	292.62022	0.69%	0.08%	0.30%
50	205.88106	206.92034	291.89559	0.82%	0.28%	0.55%
			Rata-rata:	0.62%	0.35%	0.33%

Iterasi 5				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.65185	207.01766	291.80301	0.93%	0.23%	0.58%
2	206.79309	209.13568	294.11072	0.38%	0.79%	0.21%
3	207.17133	208.01938	293.58478	0.20%	0.25%	0.03%
4	206.79296	209.13570	294.11064	0.38%	0.79%	0.21%
5	205.65216	207.01754	291.80314	0.93%	0.23%	0.58%
6	204.84083	206.04342	290.54028	1.32%	0.70%	1.01%
7	204.50135	205.81934	290.14204	1.48%	0.81%	1.15%
8	204.84099	206.04335	290.54035	1.32%	0.70%	1.01%
9	206.68396	208.99166	293.93158	0.43%	0.72%	0.15%
10	207.24710	209.47953	294.67446	0.16%	0.95%	0.40%
11	207.24696	209.47957	294.67438	0.16%	0.95%	0.40%
12	206.61745	208.87210	293.79980	0.46%	0.66%	0.10%
13	205.59476	207.71821	292.26026	0.96%	0.11%	0.42%
14	205.27111	207.35197	291.77229	1.11%	0.07%	0.59%
15	205.27275	207.35460	291.77531	1.11%	0.07%	0.59%
16	205.86119	207.89818	292.57560	0.83%	0.19%	0.32%
17	206.18339	208.31943	293.10164	0.67%	0.39%	0.14%
18	207.11925	209.35999	294.49956	0.22%	0.90%	0.34%
19	206.79269	209.13563	294.11040	0.38%	0.79%	0.21%
20	207.11907	209.35990	294.49937	0.22%	0.90%	0.34%
21	206.18360	208.31943	293.10179	0.67%	0.39%	0.14%
22	205.63893	206.91758	291.72291	0.94%	0.28%	0.61%
23	204.84027	206.04350	290.53995	1.32%	0.70%	1.01%
24	205.63912	206.91764	291.72308	0.94%	0.28%	0.61%
25	206.61301	208.87130	293.79611	0.47%	0.66%	0.10%
26	206.67951	208.99056	293.92767	0.43%	0.72%	0.14%
27	205.85679	207.89721	292.57182	0.83%	0.19%	0.32%
28	205.58890	207.71480	292.25372	0.96%	0.10%	0.43%
29	205.65076	207.01811	291.80256	0.93%	0.23%	0.58%
30	206.61315	208.87161	293.79643	0.47%	0.66%	0.10%
31	207.24293	209.47875	294.67097	0.16%	0.95%	0.40%
32	207.24275	209.47889	294.67094	0.16%	0.95%	0.40%
33	206.67954	208.99072	293.92781	0.43%	0.72%	0.14%

34	205.86104	207.89838	292.57564	0.83%	0.19%	0.32%
35	205.26688	207.35108	291.76868	1.11%	0.07%	0.59%
36	205.27120	207.35227	291.77256	1.11%	0.07%	0.59%
37	205.58901	207.71483	292.25381	0.96%	0.10%	0.43%
38	206.18330	208.32010	293.10206	0.67%	0.40%	0.14%
39	207.11453	209.36526	294.49998	0.22%	0.90%	0.34%
40	206.79280	209.13626	294.11093	0.38%	0.79%	0.21%
41	207.11421	209.36528	294.49977	0.22%	0.90%	0.34%
42	206.18362	208.31985	293.10210	0.67%	0.40%	0.14%
43	205.63454	206.92226	291.72313	0.94%	0.28%	0.61%
44	204.84017	206.04385	290.54012	1.32%	0.70%	1.01%
45	205.63465	206.92231	291.72324	0.94%	0.28%	0.61%
46	206.68046	208.99137	293.92891	0.43%	0.72%	0.14%
47	206.61388	208.87191	293.79716	0.47%	0.66%	0.10%
48	205.58971	207.71525	292.25460	0.96%	0.10%	0.43%
49	205.85761	207.89787	292.57287	0.83%	0.19%	0.32%
50	205.65234	207.01821	291.80375	0.93%	0.23%	0.58%
			Rata-rata:	0.71%	0.50%	0.41%

Iterasi 6				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.64398	206.43697	291.38577	0.93%	0.51%	0.72%
2	206.86417	208.45917	293.68011	0.34%	0.46%	0.06%
3	207.16406	207.04278	292.88848	0.20%	0.22%	0.21%
4	206.86407	208.45933	293.68016	0.34%	0.46%	0.06%
5	205.64421	206.43686	291.38586	0.93%	0.51%	0.72%
6	204.88808	205.96476	290.51783	1.30%	0.74%	1.02%
7	204.46706	205.61104	289.97014	1.50%	0.91%	1.20%
8	204.88821	205.96456	290.51777	1.30%	0.74%	1.02%
9	206.75019	208.46295	293.60252	0.40%	0.46%	0.03%
10	207.33238	208.73198	294.20359	0.12%	0.59%	0.24%
11	207.33224	208.73209	294.20357	0.12%	0.59%	0.24%
12	206.68519	208.35223	293.47814	0.43%	0.41%	0.01%
13	205.67544	207.46033	292.13383	0.92%	0.02%	0.47%
14	205.32263	207.29156	291.76561	1.09%	0.10%	0.59%
15	205.32446	207.29439	291.76891	1.09%	0.10%	0.59%
16	205.92755	207.63052	292.43219	0.80%	0.06%	0.37%
17	206.23023	207.91566	292.84779	0.65%	0.20%	0.22%
18	207.28736	208.78130	294.20687	0.14%	0.62%	0.24%
19	206.86384	208.45946	293.68009	0.35%	0.46%	0.06%
20	207.28716	208.78131	294.20673	0.14%	0.62%	0.24%
21	206.23044	207.91565	292.84794	0.65%	0.20%	0.22%
22	205.80126	206.80086	291.75462	0.86%	0.34%	0.60%
23	204.88767	205.96511	290.51778	1.30%	0.74%	1.02%
24	205.80146	206.80083	291.75473	0.86%	0.34%	0.60%
25	206.68050	208.35154	293.47434	0.43%	0.41%	0.01%
26	206.74544	208.46208	293.59856	0.40%	0.46%	0.03%
27	205.92289	207.62978	292.42839	0.80%	0.06%	0.37%
28	205.66916	207.45676	292.12687	0.92%	0.02%	0.47%
29	205.64321	206.43801	291.38597	0.93%	0.51%	0.72%
30	206.68054	208.35142	293.47429	0.43%	0.41%	0.01%

31	207.32784	208.73095	294.19966	0.12%	0.59%	0.24%
32	207.32768	208.73117	294.19971	0.12%	0.59%	0.24%
33	206.74534	208.46191	293.59837	0.40%	0.46%	0.03%
34	205.92743	207.63069	292.43223	0.80%	0.06%	0.37%
35	205.31798	207.29050	291.76159	1.09%	0.10%	0.59%
36	205.32277	207.29167	291.76579	1.09%	0.10%	0.59%
37	205.66909	207.45638	292.12655	0.92%	0.02%	0.47%
38	206.23024	207.91592	292.84798	0.65%	0.20%	0.22%
39	207.28223	208.78711	294.20737	0.14%	0.62%	0.24%
40	206.86407	208.45963	293.68037	0.34%	0.46%	0.06%
41	207.28191	208.78727	294.20727	0.14%	0.62%	0.24%
42	206.23048	207.91569	292.84799	0.65%	0.20%	0.22%
43	205.79635	206.80613	291.75489	0.86%	0.33%	0.60%
44	204.88758	205.96510	290.51772	1.30%	0.74%	1.02%
45	205.79645	206.80605	291.75490	0.86%	0.33%	0.60%
46	206.74641	208.46213	293.59928	0.40%	0.46%	0.03%
47	206.68136	208.35149	293.47491	0.43%	0.41%	0.01%
48	205.66992	207.45659	292.12729	0.92%	0.02%	0.47%
49	205.92367	207.62974	292.42891	0.80%	0.06%	0.37%
50	205.64460	206.43713	291.38633	0.93%	0.51%	0.72%
			Rata-rata:	0.67%	0.38%	0.39%

Iterasi 7				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.70457	206.61425	291.55415	0.90%	0.43%	0.66%
2	206.87632	208.90306	294.00391	0.34%	0.68%	0.17%
3	207.02229	207.38861	293.03288	0.27%	0.05%	0.16%
4	206.87628	208.90322	294.00400	0.34%	0.68%	0.17%
5	205.70474	206.61397	291.55406	0.90%	0.43%	0.67%
6	205.16638	206.20170	290.88208	1.16%	0.63%	0.89%
7	204.69822	205.59630	290.12273	1.39%	0.92%	1.15%
8	205.16645	206.20149	290.88198	1.16%	0.63%	0.89%
9	206.83174	208.85401	293.93769	0.36%	0.65%	0.15%
10	207.31763	209.21613	294.53691	0.13%	0.83%	0.35%
11	207.31753	209.21623	294.53691	0.13%	0.83%	0.35%
12	206.76879	208.75024	293.81967	0.39%	0.60%	0.11%
13	205.90244	207.74570	292.49631	0.81%	0.12%	0.34%
14	205.63214	207.45897	292.10238	0.94%	0.02%	0.48%
15	205.63415	207.46201	292.10595	0.94%	0.02%	0.48%
16	206.14104	207.91054	292.78135	0.69%	0.20%	0.25%
17	206.36269	208.23837	293.17022	0.59%	0.36%	0.11%
18	207.42588	209.23599	294.62721	0.07%	0.84%	0.38%
19	206.87610	208.90321	294.00386	0.34%	0.68%	0.17%
20	207.42569	209.23598	294.62707	0.07%	0.84%	0.38%
21	206.36292	208.23823	293.17028	0.59%	0.36%	0.11%
22	206.16591	207.05870	292.19460	0.68%	0.21%	0.45%
23	205.16614	206.20199	290.88211	1.16%	0.63%	0.89%
24	206.16611	207.05865	292.19471	0.68%	0.21%	0.45%
25	206.76386	208.74946	293.81564	0.39%	0.60%	0.11%
26	206.82676	208.85298	293.93345	0.36%	0.65%	0.15%
27	206.13617	207.90963	292.77728	0.70%	0.20%	0.25%

28	205.89575	207.74181	292.48884	0.81%	0.12%	0.35%
29	205.70421	206.61520	291.55456	0.90%	0.43%	0.66%
30	206.76379	208.74967	293.81574	0.39%	0.60%	0.11%
31	207.31274	209.21526	294.53285	0.13%	0.83%	0.35%
32	207.31263	209.21549	294.53293	0.13%	0.83%	0.35%
33	206.82654	208.85312	293.93340	0.36%	0.65%	0.15%
34	206.14097	207.91086	292.78153	0.69%	0.20%	0.25%
35	205.62711	207.45812	292.09824	0.94%	0.02%	0.48%
36	205.63232	207.45927	292.10272	0.94%	0.02%	0.48%
37	205.89548	207.74178	292.48863	0.81%	0.12%	0.35%
38	206.36276	208.23900	293.17072	0.59%	0.36%	0.11%
39	207.42040	209.24302	294.62835	0.08%	0.84%	0.38%
40	206.87637	208.90373	294.00442	0.34%	0.68%	0.17%
41	207.42012	209.24322	294.62830	0.08%	0.84%	0.38%
42	206.36293	208.23866	293.17060	0.59%	0.36%	0.11%
43	206.16056	207.06522	292.19545	0.68%	0.21%	0.45%
44	205.16603	206.20240	290.88233	1.16%	0.63%	0.89%
45	206.16060	207.06512	292.19541	0.68%	0.21%	0.45%
46	206.82762	208.85329	293.93428	0.36%	0.65%	0.15%
47	206.76462	208.74967	293.81633	0.39%	0.60%	0.11%
48	205.89638	207.74194	292.48938	0.81%	0.12%	0.35%
49	206.13681	207.90991	292.77793	0.70%	0.20%	0.25%
50	205.70522	206.61447	291.55476	0.90%	0.43%	0.66%
			Rata-rata:	0.60%	0.46%	0.37%

Iterasi 8				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.44894	206.19719	291.07825	1.03%	0.63%	0.83%
2	206.81280	208.62492	293.76163	0.37%	0.54%	0.09%
3	206.92625	207.00544	292.69391	0.31%	0.24%	0.28%
4	206.81276	208.62511	293.76174	0.37%	0.54%	0.09%
5	205.44894	206.19679	291.07796	1.03%	0.63%	0.83%
6	204.85694	205.91092	290.45770	1.31%	0.77%	1.04%
7	204.25165	205.13807	289.48293	1.60%	1.14%	1.37%
8	204.85702	205.91068	290.45758	1.31%	0.77%	1.04%
9	206.69655	208.58153	293.64897	0.43%	0.52%	0.05%
10	207.28688	208.96123	294.33425	0.14%	0.70%	0.28%
11	207.28677	208.96133	294.33424	0.14%	0.70%	0.28%
12	206.63563	208.48412	293.53690	0.45%	0.47%	0.01%
13	205.67478	207.45597	292.13027	0.92%	0.02%	0.47%
14	205.28596	207.13774	291.63053	1.11%	0.17%	0.64%
15	205.28813	207.14095	291.63434	1.10%	0.17%	0.64%
16	205.90221	207.61603	292.40406	0.81%	0.06%	0.38%
17	206.16617	207.93532	292.81664	0.68%	0.21%	0.23%
18	207.43379	208.98307	294.45322	0.07%	0.71%	0.32%
19	206.81244	208.62512	293.76151	0.37%	0.54%	0.09%
20	207.43356	208.98308	294.45307	0.07%	0.71%	0.32%
21	206.16635	207.93509	292.81660	0.68%	0.21%	0.23%
22	205.97799	206.76897	291.85671	0.77%	0.35%	0.56%
23	204.85668	205.91129	290.45778	1.31%	0.77%	1.04%
24	205.97823	206.76889	291.85682	0.77%	0.35%	0.56%

25	206.63041	208.48331	293.53266	0.46%	0.47%	0.01%
26	206.69116	208.58047	293.64442	0.43%	0.52%	0.05%
27	205.89695	207.61507	292.39968	0.81%	0.06%	0.38%
28	205.66766	207.45185	292.12233	0.92%	0.02%	0.47%
29	205.44860	206.19827	291.07878	1.03%	0.63%	0.83%
30	206.63062	208.48356	293.53298	0.46%	0.47%	0.01%
31	207.28190	208.96036	294.33012	0.14%	0.70%	0.28%
32	207.28180	208.96061	294.33022	0.14%	0.70%	0.28%
33	206.69115	208.58069	293.64457	0.43%	0.52%	0.05%
34	205.90228	207.61639	292.40437	0.81%	0.06%	0.38%
35	205.28079	207.13694	291.62633	1.11%	0.17%	0.64%
36	205.28637	207.13807	291.63106	1.10%	0.17%	0.64%
37	205.66760	207.45189	292.12232	0.92%	0.02%	0.47%
38	206.16669	207.93601	292.81751	0.68%	0.21%	0.23%
39	207.42830	208.99099	294.45498	0.07%	0.72%	0.32%
40	206.81315	208.62567	293.76241	0.37%	0.54%	0.09%
41	207.42801	208.99124	294.45495	0.07%	0.72%	0.32%
42	206.16672	207.93560	292.81723	0.68%	0.21%	0.23%
43	205.97251	206.77638	291.85809	0.77%	0.35%	0.56%
44	204.85695	205.91180	290.45833	1.31%	0.77%	1.04%
45	205.97255	206.77625	291.85803	0.77%	0.35%	0.56%
46	206.69243	208.58067	293.64546	0.43%	0.52%	0.05%
47	206.63154	208.48344	293.53353	0.46%	0.47%	0.01%
48	205.66863	207.45193	292.12307	0.92%	0.02%	0.47%
49	205.89798	207.61528	292.40055	0.81%	0.06%	0.38%
50	205.44979	206.19730	291.07893	1.03%	0.63%	0.83%
			Rata-rata:	0.69%	0.44%	0.42%

Iterasi 9				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.60500	206.30801	291.26690	0.95%	0.57%	0.76%
2	207.01295	208.70228	293.95749	0.27%	0.58%	0.15%
3	207.00026	206.99501	292.73887	0.28%	0.24%	0.26%
4	207.01298	208.70251	293.95767	0.27%	0.58%	0.15%
5	205.60489	206.30759	291.26653	0.95%	0.57%	0.76%
6	205.17019	206.18652	290.87401	1.16%	0.63%	0.90%
7	204.47068	205.37474	289.80518	1.50%	1.02%	1.26%
8	205.17020	206.18625	290.87382	1.16%	0.63%	0.90%
9	206.92457	208.73410	293.91785	0.32%	0.59%	0.14%
10	207.47889	209.03843	294.52429	0.05%	0.74%	0.35%
11	207.47880	209.03854	294.52430	0.05%	0.74%	0.35%
12	206.86744	208.63991	293.81074	0.34%	0.55%	0.10%
13	205.96608	207.68144	292.49548	0.78%	0.09%	0.34%
14	205.60468	207.43157	292.06359	0.95%	0.03%	0.49%
15	205.60701	207.43484	292.06756	0.95%	0.03%	0.49%
16	206.18451	207.84250	292.76365	0.67%	0.17%	0.25%
17	206.40917	208.10436	293.10778	0.56%	0.29%	0.14%
18	207.73352	209.06501	294.72257	0.07%	0.75%	0.41%
19	207.01268	208.70260	293.95752	0.27%	0.58%	0.15%
20	207.73330	209.06506	294.72246	0.07%	0.75%	0.41%
21	206.40932	208.10408	293.10769	0.56%	0.29%	0.14%

22	206.36209	206.99007	292.28445	0.59%	0.25%	0.42%
23	205.17009	206.18701	290.87428	1.16%	0.63%	0.90%
24	206.36231	206.98994	292.28451	0.59%	0.25%	0.42%
25	206.86208	208.63915	293.80643	0.35%	0.55%	0.10%
26	206.91902	208.73319	293.91330	0.32%	0.59%	0.14%
27	206.17910	207.84166	292.75925	0.67%	0.16%	0.25%
28	205.95863	207.67727	292.48728	0.78%	0.09%	0.35%
29	205.60502	206.30924	291.26779	0.95%	0.57%	0.76%
30	206.86224	208.63930	293.80665	0.35%	0.55%	0.10%
31	207.47369	209.03758	294.52002	0.05%	0.74%	0.35%
32	207.47363	209.03782	294.52015	0.05%	0.74%	0.35%
33	206.91897	208.73337	293.91339	0.32%	0.59%	0.14%
34	206.18462	207.84285	292.76398	0.67%	0.17%	0.25%
35	205.59930	207.43083	292.05928	0.95%	0.03%	0.49%
36	205.60513	207.43181	292.06408	0.95%	0.03%	0.49%
37	205.95848	207.67728	292.48718	0.78%	0.09%	0.35%
38	206.40975	208.10492	293.10859	0.56%	0.29%	0.14%
39	207.72804	209.07367	294.72485	0.07%	0.76%	0.42%
40	207.01343	208.70301	293.95834	0.27%	0.58%	0.15%
41	207.72781	209.07398	294.72491	0.07%	0.76%	0.42%
42	206.40969	208.10450	293.10824	0.56%	0.29%	0.14%
43	206.35651	206.99826	292.28631	0.59%	0.24%	0.42%
44	205.17037	206.18744	290.87478	1.16%	0.63%	0.90%
45	206.35649	206.99808	292.28617	0.59%	0.24%	0.42%
46	206.92014	208.73310	293.91402	0.32%	0.59%	0.14%
47	206.86307	208.63905	293.80705	0.35%	0.55%	0.10%
48	205.95947	207.67716	292.48779	0.78%	0.09%	0.35%
49	206.17996	207.84161	292.75982	0.67%	0.16%	0.25%
50	205.60574	206.30798	291.26741	0.95%	0.57%	0.76%
			Rata-rata:	0.57%	0.45%	0.39%

Iterasi 10				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.27576	206.08934	290.87962	1.11%	0.68%	0.89%
2	206.72022	208.60083	293.67934	0.41%	0.53%	0.06%
3	206.61139	206.86300	292.37060	0.47%	0.31%	0.39%
4	206.72029	208.60105	293.67954	0.41%	0.53%	0.06%
5	205.27555	206.08881	290.87910	1.11%	0.68%	0.89%
6	204.94923	205.98962	290.57858	1.27%	0.73%	1.00%
7	204.18031	205.06805	289.38298	1.64%	1.17%	1.40%
8	204.94920	205.98935	290.57836	1.27%	0.73%	1.00%
9	206.64297	208.63166	293.64687	0.45%	0.55%	0.05%
10	207.17423	208.97984	294.26813	0.20%	0.71%	0.26%
11	207.17416	208.97992	294.26814	0.20%	0.71%	0.26%
12	206.58838	208.54107	293.54409	0.48%	0.50%	0.01%
13	205.73083	207.51995	292.21517	0.89%	0.01%	0.44%
14	205.38501	207.21509	291.75520	1.06%	0.14%	0.60%
15	205.38746	207.21848	291.75933	1.06%	0.14%	0.60%
16	205.94104	207.68013	292.47691	0.79%	0.09%	0.35%
17	206.14223	207.94545	292.80698	0.69%	0.21%	0.24%
18	207.53328	208.95932	294.50647	0.02%	0.70%	0.34%

19	206.71997	208.60112	293.67937	0.41%	0.53%	0.06%
20	207.53306	208.95939	294.50636	0.02%	0.70%	0.34%
21	206.14237	207.94508	292.80682	0.69%	0.21%	0.24%
22	206.21577	206.78408	292.03527	0.66%	0.35%	0.50%
23	204.94923	205.99014	290.57894	1.27%	0.73%	1.00%
24	206.21599	206.78393	292.03532	0.66%	0.35%	0.50%
25	206.58286	208.54023	293.53961	0.48%	0.50%	0.01%
26	206.63723	208.63068	293.64214	0.45%	0.54%	0.05%
27	205.93544	207.67918	292.47230	0.79%	0.09%	0.35%
28	205.72309	207.51556	292.20660	0.89%	0.01%	0.44%
29	205.27603	206.09055	290.88067	1.11%	0.68%	0.89%
30	206.58306	208.54053	293.53997	0.48%	0.50%	0.01%
31	207.16889	208.97907	294.26383	0.20%	0.71%	0.26%
32	207.16886	208.97929	294.26396	0.20%	0.71%	0.26%
33	206.63722	208.63105	293.64239	0.45%	0.55%	0.05%
34	205.94122	207.68053	292.47733	0.79%	0.09%	0.35%
35	205.37948	207.21447	291.75086	1.06%	0.14%	0.60%
36	205.38554	207.21539	291.75579	1.06%	0.14%	0.60%
37	205.72293	207.51579	292.20665	0.89%	0.01%	0.44%
38	206.14297	207.94619	292.80803	0.69%	0.22%	0.24%
39	207.52770	208.96890	294.50933	0.03%	0.71%	0.34%
40	206.72085	208.60169	293.68040	0.41%	0.53%	0.06%
41	207.52751	208.96923	294.50943	0.03%	0.71%	0.34%
42	206.14281	207.94569	292.80756	0.69%	0.21%	0.24%
43	206.20999	206.79317	292.03763	0.66%	0.34%	0.50%
44	204.94960	205.99077	290.57966	1.27%	0.73%	1.00%
45	206.20991	206.79298	292.03743	0.66%	0.34%	0.50%
46	206.63835	208.63068	293.64293	0.45%	0.54%	0.05%
47	206.58385	208.54024	293.54032	0.48%	0.50%	0.01%
48	205.72394	207.51560	292.20723	0.89%	0.01%	0.44%
49	205.93630	207.67926	292.47296	0.79%	0.09%	0.35%
50	205.27648	206.08936	290.88014	1.11%	0.68%	0.89%
			Rata-rata:	0.69%	0.44%	0.41%

Iterasi 11				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	205.46872	206.13614	291.04897	1.02%	0.66%	0.84%
2	207.05664	208.62731	293.93503	0.25%	0.54%	0.15%
3	206.89225	206.89326	292.59054	0.33%	0.29%	0.31%
4	207.05672	208.62751	293.93524	0.25%	0.54%	0.15%
5	205.46835	206.13563	291.04834	1.02%	0.66%	0.84%
6	205.16363	206.06275	290.78165	1.16%	0.69%	0.93%
7	204.27134	205.14400	289.50102	1.59%	1.14%	1.36%
8	205.16357	206.06249	290.78143	1.16%	0.69%	0.93%
9	206.95433	208.70120	293.91544	0.30%	0.58%	0.14%
10	207.53840	209.03130	294.56116	0.02%	0.74%	0.36%
11	207.53832	209.03137	294.56114	0.02%	0.74%	0.36%
12	206.90315	208.61148	293.81569	0.33%	0.54%	0.11%
13	205.98690	207.59268	292.44713	0.77%	0.04%	0.36%
14	205.57888	207.30348	291.95447	0.96%	0.09%	0.53%
15	205.58148	207.30689	291.95871	0.96%	0.09%	0.53%

16	206.19238	207.75654	292.70817	0.67%	0.12%	0.27%
17	206.40806	207.99456	293.02905	0.56%	0.24%	0.16%
18	207.92813	208.94746	294.77643	0.17%	0.70%	0.43%
19	207.05636	208.62767	293.93510	0.25%	0.54%	0.15%
20	207.92791	208.94754	294.77634	0.17%	0.70%	0.43%
21	206.40814	207.99414	293.02881	0.56%	0.24%	0.16%
22	206.49358	206.79691	292.24058	0.52%	0.34%	0.43%
23	205.16369	206.06333	290.78211	1.16%	0.69%	0.93%
24	206.49379	206.79673	292.24061	0.52%	0.34%	0.43%
25	206.89746	208.61068	293.81113	0.33%	0.54%	0.10%
26	206.94838	208.70035	293.91064	0.30%	0.58%	0.14%
27	206.18656	207.75568	292.70347	0.67%	0.12%	0.27%
28	205.97882	207.58831	292.43834	0.77%	0.04%	0.36%
29	205.46910	206.13736	291.05010	1.02%	0.66%	0.84%
30	206.89785	208.61092	293.81157	0.33%	0.54%	0.10%
31	207.53305	209.03057	294.55686	0.02%	0.74%	0.36%
32	207.53301	209.03077	294.55698	0.02%	0.74%	0.36%
33	206.94855	208.70071	293.91102	0.30%	0.58%	0.14%
34	206.19265	207.75691	292.70863	0.67%	0.12%	0.27%
35	205.57333	207.30294	291.95017	0.97%	0.09%	0.53%
36	205.57953	207.30370	291.95508	0.96%	0.09%	0.53%
37	205.97884	207.58855	292.43852	0.77%	0.04%	0.36%
38	206.40907	207.99518	293.03020	0.56%	0.24%	0.16%
39	207.92298	208.95764	294.78002	0.17%	0.70%	0.43%
40	207.05749	208.62812	293.93621	0.25%	0.54%	0.15%
41	207.92283	208.95797	294.78015	0.17%	0.70%	0.43%
42	206.40879	207.99469	293.02966	0.56%	0.24%	0.16%
43	206.48812	206.80666	292.24363	0.53%	0.33%	0.43%
44	205.16430	206.06389	290.78294	1.16%	0.69%	0.93%
45	206.48800	206.80647	292.24341	0.53%	0.33%	0.43%
46	206.94963	208.70019	293.91142	0.30%	0.58%	0.14%
47	206.89861	208.61058	293.81186	0.33%	0.54%	0.10%
48	205.97983	207.58825	292.43900	0.77%	0.04%	0.36%
49	206.18756	207.75563	292.70414	0.67%	0.12%	0.27%
50	205.46947	206.13613	291.04949	1.02%	0.66%	0.84%
			Rata-rata:	0.58%	0.45%	0.41%

Kasus 2
Hasil Iterasi Steepest Descent R=1.1m; k = 3,14

	Iterasi 1			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	364.89467	121.33555	384.53925	3.16%	1.15%	2.76%
2	372.46531	127.84231	393.79445	1.15%	6.57%	0.42%
3	372.31141	122.47897	391.93990	1.19%	2.10%	0.89%
4	372.46531	127.84231	393.79445	1.15%	6.57%	0.42%
5	364.89467	121.33555	384.53925	3.16%	1.15%	2.76%
6	369.14542	116.92791	387.22148	2.03%	2.53%	2.08%
7	351.45892	117.23492	370.49616	6.73%	2.27%	6.31%
8	369.14542	116.92791	387.22148	2.03%	2.53%	2.08%
9	370.69427	127.44138	391.98922	1.62%	6.24%	0.87%
10	373.52966	126.75900	394.45184	0.87%	5.67%	0.25%
11	373.52966	126.75900	394.45184	0.87%	5.67%	0.25%
12	368.90084	125.72017	389.73503	2.10%	4.80%	1.44%
13	361.09097	112.13812	378.10269	4.17%	6.52%	4.39%
14	356.63920	112.02883	373.82078	5.35%	6.61%	5.47%
15	356.63920	112.02883	373.82078	5.35%	6.61%	5.47%
16	362.68671	112.65546	379.78007	3.75%	6.09%	3.96%
17	368.66702	121.68657	388.23059	2.16%	1.44%	1.82%
18	363.94355	126.54999	385.31780	3.41%	5.49%	2.56%
19	372.46531	127.84231	393.79445	1.15%	6.57%	0.42%
20	363.94355	126.54999	385.31780	3.41%	5.49%	2.56%
21	368.66702	121.68657	388.23059	2.16%	1.44%	1.82%
22	362.23298	100.00192	375.78334	3.87%	16.64%	4.97%
23	369.14542	116.92791	387.22148	2.03%	2.53%	2.08%
24	362.23298	100.00192	375.78334	3.87%	16.64%	4.97%
25	368.90084	125.72017	389.73503	2.10%	4.80%	1.44%
26	370.69427	127.44138	391.98922	1.62%	6.24%	0.87%
27	362.68671	112.65546	379.78007	3.75%	6.09%	3.96%
28	361.09097	112.13812	378.10269	4.17%	6.52%	4.39%
29	364.89467	121.33555	384.53925	3.16%	1.15%	2.76%
30	368.90084	125.72017	389.73503	2.10%	4.80%	1.44%
31	373.52966	126.75900	394.45184	0.87%	5.67%	0.25%
32	373.52966	126.75900	394.45184	0.87%	5.67%	0.25%
33	370.69427	127.44138	391.98922	1.62%	6.24%	0.87%
34	362.68671	112.65546	379.78007	3.75%	6.09%	3.96%
35	356.63920	112.02883	373.82078	5.35%	6.61%	5.47%
36	356.63920	112.02883	373.82078	5.35%	6.61%	5.47%
37	361.09097	112.13812	378.10269	4.17%	6.52%	4.39%
38	368.66702	121.68657	388.23059	2.16%	1.44%	1.82%
39	363.94355	126.54999	385.31780	3.41%	5.49%	2.56%
40	372.46531	127.84231	393.79445	1.15%	6.57%	0.42%
41	363.94355	126.54999	385.31780	3.41%	5.49%	2.56%
42	368.66702	121.68657	388.23059	2.16%	1.44%	1.82%
43	362.23298	100.00192	375.78334	3.87%	16.64%	4.97%
44	369.14542	116.92791	387.22148	2.03%	2.53%	2.08%
45	362.23298	100.00192	375.78334	3.87%	16.64%	4.97%

46	370.69427	127.44138	391.98922	1.62%	6.24%	0.87%
47	368.90084	125.72017	389.73503	2.10%	4.80%	1.44%
48	361.09097	112.13812	378.10269	4.17%	6.52%	4.39%
49	362.68671	112.65546	379.78007	3.75%	6.09%	3.96%
50	364.89467	121.33555	384.53925	3.16%	1.15%	2.76%
			Rata-rata:	2.85%	5.67%	2.62%

	Iterasi 2			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	363.68855	100.76888	377.39068	3.48%	16.00%	4.57%
2	373.76071	99.08337	386.67115	0.81%	17.40%	2.22%
3	374.66715	96.45814	386.88454	0.57%	19.59%	2.16%
4	373.75854	99.08550	386.66960	0.81%	17.40%	2.22%
5	363.68953	100.75973	377.38919	3.48%	16.01%	4.57%
6	363.32029	100.54904	376.97711	3.58%	16.18%	4.67%
7	346.53873	103.39035	361.63332	8.03%	13.81%	8.55%
8	363.32247	100.54695	376.97866	3.58%	16.18%	4.67%
9	371.08281	101.93432	384.82861	1.52%	15.03%	2.68%
10	375.46033	99.29690	388.36881	0.36%	17.22%	1.79%
11	375.46011	99.29851	388.36901	0.36%	17.22%	1.79%
12	368.99940	100.74577	382.50526	2.07%	16.02%	3.27%
13	356.29865	95.62903	368.90872	5.44%	20.28%	6.71%
14	350.21033	97.72328	363.58921	7.06%	18.54%	8.06%
15	350.22556	97.71926	363.60281	7.06%	18.54%	8.05%
16	357.86567	95.74285	370.45179	5.03%	20.19%	6.32%
17	366.29837	100.00398	379.70421	2.79%	16.64%	3.98%
18	364.69176	100.98401	378.41492	3.22%	15.82%	4.31%
19	373.75783	99.08374	386.66846	0.81%	17.40%	2.22%
20	364.69029	100.98415	378.41354	3.22%	15.82%	4.31%
21	366.30109	100.00043	379.70590	2.79%	16.64%	3.98%
22	354.41809	86.40389	364.79832	5.94%	27.97%	7.75%
23	363.31925	100.55418	376.97748	3.58%	16.18%	4.67%
24	354.41907	86.40401	364.79930	5.94%	27.97%	7.75%
25	368.98987	100.76892	382.50216	2.08%	16.00%	3.27%
26	371.07042	101.95392	384.82185	1.52%	15.01%	2.69%
27	357.85551	95.76352	370.44732	5.03%	20.17%	6.32%
28	356.27580	95.65616	368.89368	5.45%	20.26%	6.71%
29	363.68759	100.78285	377.39349	3.48%	15.99%	4.56%
30	368.99151	100.77095	382.50428	2.07%	16.00%	3.27%
31	375.45089	99.31835	388.36517	0.36%	17.21%	1.79%
32	375.45034	99.32054	388.36520	0.36%	17.21%	1.79%
33	371.06873	101.95337	384.82008	1.52%	15.01%	2.69%
34	357.86605	95.74800	370.45349	5.03%	20.18%	6.32%
35	350.19693	97.74469	363.58206	7.06%	18.52%	8.06%
36	350.21285	97.73021	363.59350	7.06%	18.53%	8.05%
37	356.27419	95.65490	368.89180	5.45%	20.26%	6.71%
38	366.30431	100.01686	379.71334	2.79%	16.62%	3.98%
39	364.68630	101.00026	378.41400	3.22%	15.81%	4.31%
40	373.76551	99.09600	386.67903	0.81%	17.39%	2.22%
41	364.68366	101.00160	378.41180	3.22%	15.80%	4.31%
42	366.30437	100.01095	379.71184	2.79%	16.63%	3.98%

43	354.40743	86.41726	364.79113	5.95%	27.96%	7.75%
44	363.32116	100.56635	376.98256	3.58%	16.17%	4.67%
45	354.40985	86.41546	364.79306	5.94%	27.96%	7.75%
46	371.08256	101.95439	384.83368	1.52%	15.01%	2.68%
47	369.00017	100.76909	382.51214	2.07%	16.00%	3.27%
48	356.28305	95.65639	368.90074	5.45%	20.26%	6.71%
49	357.86420	95.76431	370.45592	5.03%	20.17%	6.32%
50	363.70110	100.77278	377.40382	3.48%	15.99%	4.56%
			Rata-rata:	3.48%	18.04%	4.72%

Iterasi 3				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	365.63746	122.26557	385.53809	2.97%	1.92%	2.51%
2	375.63752	119.59949	394.21769	0.31%	0.30%	0.31%
3	373.31457	117.62555	391.40712	0.93%	1.95%	1.02%
4	375.63142	119.60352	394.21309	0.31%	0.30%	0.31%
5	365.64347	122.25299	385.53980	2.96%	1.91%	2.50%
6	367.39537	123.17841	387.49488	2.50%	2.68%	2.01%
7	350.97901	124.64065	372.45343	6.86%	3.90%	5.81%
8	367.40159	123.17481	387.49963	2.50%	2.68%	2.01%
9	373.51944	122.94059	393.23169	0.87%	2.48%	0.56%
10	375.40335	120.04013	394.12855	0.37%	0.07%	0.33%
11	375.40139	120.04462	394.12804	0.37%	0.07%	0.33%
12	371.22678	121.43621	390.58428	1.48%	1.23%	1.23%
13	358.55936	116.77861	377.09688	4.84%	2.65%	4.64%
14	354.71418	118.87398	374.10316	5.86%	0.91%	5.40%
15	354.73095	118.87673	374.11993	5.86%	0.90%	5.39%
16	360.31805	117.00486	378.83932	4.38%	2.46%	4.20%
17	368.80693	121.43129	388.28354	2.12%	1.23%	1.81%
18	365.77117	120.25263	385.03148	2.93%	0.24%	2.63%
19	375.63367	119.59949	394.21402	0.31%	0.30%	0.31%
20	365.76839	120.25288	385.02892	2.93%	0.24%	2.63%
21	368.81158	121.42727	388.28671	2.12%	1.22%	1.81%
22	357.35974	106.68307	372.94404	5.16%	11.07%	5.69%
23	367.39354	123.18505	387.49525	2.50%	2.69%	2.01%
24	357.36173	106.68294	372.94591	5.16%	11.07%	5.69%
25	371.20928	121.46069	390.57525	1.49%	1.25%	1.23%
26	373.49936	122.95737	393.21786	0.88%	2.50%	0.56%
27	360.30052	117.02647	378.82933	4.38%	2.45%	4.20%
28	358.52844	116.80151	377.07458	4.85%	2.63%	4.65%
29	365.63068	122.28867	385.53899	2.97%	1.94%	2.50%
30	371.21077	121.46213	390.57712	1.49%	1.25%	1.23%
31	375.38698	120.05871	394.11861	0.38%	0.08%	0.34%
32	375.38391	120.06402	394.11730	0.38%	0.09%	0.34%
33	373.49668	122.95247	393.21379	0.88%	2.49%	0.56%
34	360.31653	117.01385	378.84065	4.38%	2.46%	4.20%
35	354.69111	118.89120	374.08675	5.87%	0.89%	5.40%
36	354.71585	118.88585	374.10851	5.86%	0.90%	5.40%
37	358.52730	116.79497	377.07147	4.85%	2.64%	4.65%
38	368.81258	121.45013	388.29480	2.12%	1.24%	1.81%
39	365.76343	120.27094	385.02985	2.93%	0.26%	2.63%

40	375.64326	119.61762	394.22865	0.31%	0.29%	0.31%
41	365.75735	120.27232	385.02451	2.93%	0.26%	2.63%
42	368.81490	121.44226	388.29454	2.12%	1.24%	1.81%
43	357.34529	106.69649	372.93404	5.17%	11.06%	5.69%
44	367.39275	123.20220	387.49996	2.50%	2.70%	2.01%
45	357.35146	106.69492	372.93950	5.16%	11.06%	5.69%
46	373.52415	122.95923	393.24199	0.87%	2.50%	0.56%
47	371.23086	121.46069	390.59576	1.48%	1.25%	1.23%
48	358.54417	116.80109	377.08940	4.85%	2.63%	4.64%
49	360.31886	117.02821	378.84731	4.38%	2.44%	4.20%
50	365.66425	122.27335	385.56597	2.96%	1.93%	2.50%
			Rata-rata:	2.86%	2.30%	2.64%

Iterasi 4				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	360.32731	106.64715	375.77838	4.37%	11.10%	4.97%
2	369.95898	105.37420	384.67307	1.82%	12.16%	2.72%
3	373.26722	106.39808	388.13525	0.94%	11.31%	1.85%
4	369.96138	105.38030	384.67705	1.82%	12.15%	2.72%
5	360.32358	106.63168	375.77040	4.38%	11.11%	4.98%
6	359.80310	104.63508	374.70892	4.51%	12.78%	5.24%
7	341.20114	106.04059	357.29935	9.45%	11.60%	9.65%
8	359.80108	104.62858	374.70516	4.51%	12.78%	5.24%
9	366.94172	107.38573	382.33221	2.62%	10.48%	3.32%
10	372.66004	107.67403	387.90360	1.10%	10.24%	1.91%
11	372.66529	107.67708	387.90949	1.10%	10.24%	1.91%
12	364.70225	106.44368	379.91840	3.21%	11.27%	3.93%
13	352.87836	101.49725	367.18500	6.35%	15.39%	7.15%
14	345.36854	100.93174	359.81473	8.34%	15.86%	9.01%
15	345.38817	100.92589	359.83194	8.34%	15.87%	9.01%
16	354.45045	101.43739	368.67962	5.93%	15.44%	6.77%
17	362.63294	105.68652	377.71985	3.76%	11.90%	4.48%
18	359.64508	107.49051	375.36488	4.56%	10.39%	5.08%
19	369.95469	105.37354	384.66876	1.82%	12.16%	2.72%
20	359.64464	107.49192	375.36486	4.56%	10.39%	5.08%
21	362.63422	105.68102	377.71955	3.76%	11.90%	4.48%
22	350.03058	92.11164	361.94745	7.11%	23.21%	8.47%
23	359.80209	104.63902	374.70904	4.51%	12.77%	5.24%
24	350.03038	92.11063	361.94700	7.11%	23.22%	8.47%
25	364.69665	106.47265	379.92114	3.21%	11.24%	3.93%
26	366.92802	107.41053	382.32603	2.62%	10.46%	3.32%
27	354.44490	101.46240	368.68117	5.94%	15.42%	6.77%
28	352.85593	101.52989	367.17247	6.36%	15.36%	7.15%
29	360.33737	106.66379	375.79274	4.37%	11.08%	4.97%
30	364.69846	106.47803	379.92439	3.21%	11.24%	3.92%
31	372.64960	107.70274	387.90154	1.10%	10.22%	1.91%
32	372.65508	107.70749	387.90812	1.10%	10.21%	1.91%
33	366.92198	107.41377	382.32115	2.62%	10.46%	3.32%
34	354.45701	101.44459	368.68792	5.93%	15.43%	6.77%
35	345.35411	100.96319	359.80971	8.35%	15.84%	9.01%
36	345.37686	100.93986	359.82500	8.34%	15.86%	9.01%

37	352.84757	101.53134	367.16485	6.36%	15.36%	7.15%
38	362.64339	105.70142	377.73406	3.76%	11.89%	4.48%
39	359.64201	107.51125	375.36788	4.56%	10.38%	5.08%
40	369.96605	105.38522	384.68289	1.82%	12.15%	2.72%
41	359.64077	107.51647	375.36819	4.56%	10.37%	5.08%
42	362.64110	105.69270	377.72942	3.76%	11.89%	4.48%
43	350.02192	92.13046	361.94387	7.11%	23.20%	8.47%
44	359.80900	104.65525	374.72021	4.51%	12.76%	5.24%
45	350.02301	92.12421	361.94333	7.11%	23.20%	8.47%
46	366.93470	107.39865	382.32910	2.62%	10.47%	3.32%
47	364.69998	106.46202	379.92135	3.21%	11.25%	3.93%
48	352.85692	101.52222	367.17131	6.36%	15.37%	7.15%
49	354.44896	101.45389	368.68273	5.93%	15.43%	6.77%
50	360.33452	106.63286	375.78123	4.37%	11.11%	4.97%
			Rata-rata:	4.50%	13.27%	5.27%

Iterasi 5				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	366.34759	122.25076	386.20695	2.78%	1.91%	2.34%
2	376.46144	120.27681	395.20846	0.09%	0.26%	0.06%
3	378.38607	123.06065	397.89439	0.42%	2.58%	0.62%
4	376.46307	120.28648	395.21295	0.09%	0.27%	0.06%
5	366.34684	122.22944	386.19948	2.78%	1.89%	2.34%
6	366.83857	120.83084	386.22614	2.65%	0.73%	2.33%
7	347.34390	120.34459	367.60115	7.82%	0.32%	7.04%
8	366.83749	120.82077	386.22196	2.65%	0.72%	2.33%
9	373.38545	122.34399	392.91824	0.91%	1.99%	0.64%
10	378.24386	123.37109	397.85530	0.38%	2.84%	0.61%
11	378.25048	123.37830	397.86384	0.38%	2.85%	0.61%
12	370.90023	121.17764	390.19354	1.57%	1.02%	1.33%
13	358.90185	116.96363	377.47984	4.75%	2.50%	4.54%
14	352.02831	115.51604	370.49681	6.58%	3.70%	6.31%
15	352.04820	115.51377	370.51500	6.57%	3.71%	6.30%
16	360.66321	116.95687	379.15282	4.29%	2.50%	4.12%
17	368.92756	121.25341	388.34255	2.09%	1.08%	1.80%
18	365.11576	121.16023	384.69380	3.10%	1.00%	2.72%
19	376.45545	120.27327	395.20167	0.09%	0.26%	0.06%
20	365.11502	121.16238	384.69378	3.10%	1.00%	2.72%
21	368.92907	121.24642	388.34180	2.09%	1.07%	1.80%
22	356.17843	106.59014	371.78560	5.48%	11.15%	5.98%
23	366.83643	120.83373	386.22501	2.65%	0.73%	2.33%
24	356.17825	106.58821	371.78487	5.48%	11.15%	5.98%
25	370.89089	121.20962	390.19460	1.57%	1.04%	1.33%
26	373.36659	122.36696	392.90748	0.91%	2.01%	0.64%
27	360.65576	116.98436	379.15422	4.29%	2.48%	4.12%
28	358.87693	116.99595	377.46616	4.76%	2.47%	4.55%
29	366.35623	122.27460	386.22269	2.77%	1.93%	2.33%
30	370.89276	121.21824	390.19906	1.57%	1.05%	1.33%
31	378.22934	123.40103	397.85079	0.38%	2.87%	0.61%
32	378.23551	123.41065	397.85964	0.38%	2.88%	0.61%
33	373.35905	122.36901	392.90095	0.92%	2.01%	0.64%

34	360.67105	116.96949	379.16417	4.28%	2.49%	4.12%
35	352.00840	115.54837	370.48797	6.58%	3.68%	6.31%
36	352.03750	115.52981	370.50984	6.57%	3.69%	6.31%
37	358.86649	116.99479	377.45588	4.76%	2.47%	4.55%
38	368.93737	121.27481	388.35854	2.09%	1.10%	1.79%
39	365.11109	121.18615	384.69753	3.10%	1.02%	2.72%
40	376.46767	120.29059	395.21859	0.09%	0.28%	0.06%
41	365.10773	121.19277	384.69642	3.11%	1.03%	2.72%
42	368.93619	121.26314	388.35379	2.09%	1.09%	1.79%
43	356.16832	106.61275	371.78239	5.48%	11.13%	5.98%
44	366.84201	120.85617	386.23733	2.65%	0.75%	2.33%
45	356.17164	106.60495	371.78334	5.48%	11.13%	5.98%
46	373.37919	122.35181	392.91473	0.91%	1.99%	0.64%
47	370.89837	121.19466	390.19706	1.57%	1.03%	1.33%
48	358.88063	116.98427	377.46606	4.76%	2.48%	4.55%
49	360.66413	116.97299	379.15867	4.28%	2.49%	4.12%
50	366.36133	122.23000	386.21340	2.77%	1.89%	2.33%
			Rata-rata:	2.94%	2.51%	2.77%

Iterasi 6				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	358.69620	107.71981	374.52172	4.81%	10.20%	5.29%
2	367.54453	106.76044	382.73590	2.46%	11.00%	3.21%
3	373.31418	108.16307	388.66789	0.93%	9.83%	1.71%
4	367.55073	106.76513	382.74317	2.46%	11.00%	3.21%
5	358.68622	107.70417	374.50767	4.81%	10.22%	5.29%
6	358.10567	104.82043	373.13134	4.96%	12.62%	5.64%
7	338.20042	107.04178	354.73577	10.25%	10.77%	10.29%
8	358.09987	104.81517	373.12429	4.97%	12.62%	5.64%
9	364.37496	108.67173	380.23501	3.30%	9.41%	3.85%
10	371.36518	109.45953	387.16080	1.44%	8.75%	2.09%
11	371.37437	109.45897	387.16946	1.44%	8.75%	2.09%
12	362.11594	107.97671	377.87157	3.90%	9.99%	4.44%
13	351.48915	102.45176	366.11608	6.72%	14.60%	7.42%
14	342.72941	101.58353	357.46701	9.04%	15.32%	9.60%
15	342.75109	101.57757	357.48610	9.04%	15.32%	9.60%
16	353.00546	102.25483	367.51722	6.32%	14.76%	7.06%
17	360.81341	106.83424	376.29759	4.25%	10.94%	4.84%
18	356.54696	109.65761	373.02885	5.38%	8.59%	5.67%
19	367.53820	106.76279	382.73048	2.46%	11.00%	3.22%
20	356.54758	109.65862	373.02974	5.38%	8.59%	5.67%
21	360.81352	106.83003	376.29649	4.25%	10.95%	4.84%
22	348.05234	93.39412	360.36495	7.63%	22.15%	8.87%
23	358.10369	104.82561	373.13088	4.96%	12.62%	5.64%
24	348.05111	93.39373	360.36365	7.63%	22.15%	8.87%
25	362.11545	108.00625	377.87954	3.90%	9.96%	4.44%
26	364.36250	108.70033	380.23124	3.30%	9.39%	3.85%
27	353.00429	102.27825	367.52261	6.32%	14.74%	7.06%
28	351.46930	102.48345	366.10590	6.73%	14.57%	7.42%
29	358.71353	107.73453	374.54255	4.80%	10.19%	5.29%
30	362.12006	108.01008	377.88505	3.90%	9.96%	4.44%

31	371.35781	109.48931	387.16215	1.45%	8.73%	2.09%
32	371.36822	109.49103	387.17263	1.44%	8.73%	2.09%
33	364.35512	108.70485	380.22546	3.31%	9.38%	3.85%
34	353.01683	102.25825	367.52908	6.31%	14.76%	7.06%
35	342.71820	101.61726	357.46585	9.05%	15.29%	9.60%
36	342.74252	101.58880	357.48107	9.04%	15.31%	9.60%
37	351.45867	102.48800	366.09696	6.73%	14.56%	7.42%
38	360.82887	106.84797	376.31631	4.24%	10.93%	4.84%
39	356.54897	109.67742	373.03660	5.38%	8.57%	5.67%
40	367.55332	106.77204	382.74758	2.46%	10.99%	3.21%
41	356.54995	109.68391	373.03945	5.38%	8.57%	5.67%
42	360.82393	106.83978	376.30924	4.24%	10.94%	4.84%
43	348.04757	93.41194	360.36495	7.63%	22.13%	8.87%
44	358.11552	104.84096	373.14656	4.96%	12.60%	5.64%
45	348.04628	93.40448	360.36178	7.63%	22.14%	8.87%
46	364.36236	108.68591	380.22699	3.30%	9.40%	3.85%
47	362.11203	107.99524	377.87312	3.90%	9.97%	4.44%
48	351.46417	102.47647	366.09901	6.73%	14.57%	7.42%
49	353.00237	102.26840	367.51802	6.32%	14.75%	7.06%
50	358.69325	107.70409	374.51438	4.81%	10.22%	5.29%
			Rata-rata:	5.04%	12.27%	5.68%

	Iterasi 7			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	366.85685	121.95220	386.59577	2.64%	1.66%	2.24%
2	376.04868	120.48697	394.87937	0.20%	0.44%	0.14%
3	381.53654	123.65656	401.07490	1.25%	3.08%	1.42%
4	376.05604	120.49444	394.88867	0.20%	0.45%	0.14%
5	366.84740	121.93063	386.58000	2.64%	1.64%	2.24%
6	367.13080	119.32227	386.03474	2.57%	0.53%	2.38%
7	345.51628	119.99891	365.76117	8.30%	0.03%	7.51%
8	367.12404	119.31418	386.02582	2.57%	0.54%	2.38%
9	372.64185	122.39438	392.22739	1.11%	2.03%	0.81%
10	379.48554	124.00738	399.23315	0.71%	3.37%	0.96%
11	379.49847	124.00979	399.24619	0.71%	3.38%	0.96%
12	370.10102	121.53688	389.54586	1.78%	1.31%	1.49%
13	359.73058	116.42973	378.10312	4.53%	2.94%	4.39%
14	350.88221	114.65136	369.13854	6.88%	4.43%	6.65%
15	350.90352	114.64924	369.15813	6.88%	4.43%	6.65%
16	361.44762	116.24500	379.68050	4.08%	3.10%	3.99%
17	369.12685	121.10322	388.48504	2.04%	0.95%	1.76%
18	363.75078	122.27719	383.75297	3.47%	1.93%	2.96%
19	376.03952	120.48756	394.87084	0.20%	0.44%	0.15%
20	363.75192	122.27872	383.75454	3.47%	1.93%	2.96%
21	369.12626	121.09855	388.48301	2.04%	0.95%	1.76%
22	356.20700	106.30913	371.73251	5.47%	11.38%	6.00%
23	367.12726	119.32630	386.03263	2.57%	0.53%	2.38%
24	356.20505	106.30810	371.73034	5.47%	11.38%	6.00%
25	370.10011	121.56974	389.55525	1.78%	1.34%	1.49%
26	372.62599	122.42240	392.22107	1.11%	2.05%	0.82%
27	361.44834	116.27012	379.68887	4.08%	3.08%	3.98%

28	359.71209	116.46030	378.09494	4.54%	2.92%	4.39%
29	366.87606	121.97342	386.62070	2.64%	1.68%	2.23%
30	370.10603	121.57634	389.56294	1.78%	1.35%	1.49%
31	379.47681	124.03824	399.23443	0.71%	3.40%	0.96%
32	379.49044	124.04408	399.24920	0.71%	3.40%	0.96%
33	372.61648	122.42539	392.21297	1.11%	2.06%	0.82%
34	361.46281	116.25274	379.69733	4.07%	3.09%	3.98%
35	350.86821	114.68621	369.13606	6.88%	4.40%	6.65%
36	350.89811	114.66181	369.15690	6.88%	4.42%	6.65%
37	359.69807	116.46328	378.08253	4.54%	2.91%	4.39%
38	369.14285	121.12320	388.50647	2.03%	0.97%	1.75%
39	363.75363	122.30184	383.76353	3.46%	1.95%	2.95%
40	376.05653	120.50161	394.89132	0.20%	0.45%	0.14%
41	363.75335	122.31017	383.76591	3.47%	1.96%	2.95%
42	369.13796	121.11270	388.49854	2.04%	0.96%	1.76%
43	356.20295	106.33031	371.73468	5.47%	11.36%	6.00%
44	367.13904	119.34755	386.05041	2.57%	0.51%	2.38%
45	356.20292	106.32091	371.73197	5.47%	11.37%	6.00%
46	372.62792	122.40382	392.21711	1.11%	2.04%	0.82%
47	370.09709	121.55465	389.54767	1.78%	1.33%	1.49%
48	359.70597	116.44985	378.08590	4.54%	2.93%	4.39%
49	361.44704	116.25689	379.68359	4.08%	3.09%	3.99%
50	366.85514	121.92955	386.58700	2.64%	1.64%	2.24%
			Rata-rata:	3.03%	2.79%	2.88%

Iterasi 8				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	357.24306	108.19878	373.26877	5.19%	9.80%	5.61%
2	365.44092	107.57363	380.94508	3.02%	10.33%	3.67%
3	372.92744	108.40331	388.36343	1.03%	9.63%	1.79%
4	365.44870	107.57593	380.95319	3.02%	10.32%	3.66%
5	357.22836	108.18523	373.25078	5.20%	9.82%	5.61%
6	356.49821	104.69729	371.55416	5.39%	12.72%	6.04%
7	336.15632	108.28026	353.16523	10.79%	9.74%	10.69%
8	356.49076	104.69427	371.54617	5.39%	12.73%	6.04%
9	362.28195	109.57767	378.49105	3.86%	8.65%	4.29%
10	370.03818	110.21345	386.10265	1.80%	8.12%	2.36%
11	370.04862	110.20790	386.11107	1.79%	8.13%	2.36%
12	360.06289	109.12886	376.23715	4.44%	9.03%	4.86%
13	350.09529	102.78824	364.87276	7.09%	14.31%	7.73%
14	340.63158	102.25406	355.64837	9.60%	14.76%	10.06%
15	340.65648	102.24813	355.67052	9.59%	14.76%	10.06%
16	351.52281	102.46026	366.15078	6.71%	14.59%	7.41%
17	359.29909	107.45534	375.02332	4.65%	10.42%	5.16%
18	354.03406	111.45485	371.16344	6.04%	7.09%	6.14%
19	365.43429	107.57939	380.94035	3.02%	10.32%	3.67%
20	354.03487	111.45484	371.16421	6.04%	7.09%	6.14%
21	359.29971	107.45249	375.02309	4.65%	10.43%	5.16%
22	346.15144	94.22640	358.74704	8.14%	21.45%	9.28%
23	356.49531	104.70430	371.55335	5.39%	12.72%	6.04%
24	346.15001	94.22717	358.74586	8.14%	21.45%	9.28%

25	360.06563	109.15606	376.24766	4.44%	9.01%	4.85%
26	362.27058	109.60798	378.48894	3.86%	8.63%	4.29%
27	351.52263	102.47947	366.15598	6.71%	14.57%	7.41%
28	350.07425	102.81663	364.86057	7.10%	14.29%	7.73%
29	357.26480	108.20915	373.29259	5.19%	9.80%	5.60%
30	360.07189	109.15738	376.25403	4.44%	9.01%	4.85%
31	370.03182	110.24214	386.10475	1.80%	8.10%	2.36%
32	370.04482	110.23914	386.11635	1.80%	8.10%	2.36%
33	362.26177	109.61467	378.48245	3.86%	8.62%	4.29%
34	351.53642	102.45809	366.16323	6.71%	14.59%	7.40%
35	340.62193	102.28776	355.64882	9.60%	14.73%	10.06%
36	340.64812	102.25478	355.66442	9.60%	14.76%	10.06%
37	350.06322	102.82455	364.85222	7.10%	14.28%	7.74%
38	359.31881	107.46683	375.04550	4.64%	10.41%	5.16%
39	354.03912	111.47166	371.17332	6.04%	7.08%	6.14%
40	365.45195	107.58560	380.95904	3.01%	10.32%	3.66%
41	354.04206	111.47846	371.17816	6.04%	7.07%	6.14%
42	359.31262	107.45959	375.03749	4.64%	10.42%	5.16%
43	346.14857	94.24147	358.74823	8.14%	21.44%	9.28%
44	356.51122	104.71774	371.57241	5.39%	12.71%	6.04%
45	346.14531	94.23382	358.74307	8.14%	21.45%	9.28%
46	362.26569	109.59473	378.48043	3.86%	8.64%	4.29%
47	360.05858	109.14743	376.23841	4.45%	9.01%	4.86%
48	350.06634	102.81294	364.85194	7.10%	14.29%	7.74%
49	351.51704	102.47169	366.14843	6.71%	14.58%	7.41%
50	357.23346	108.18628	373.25597	5.20%	9.81%	5.61%
			Rata-rata:	5.51%	11.68%	6.06%

Iterasi 9				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	367.24704	121.53873	386.83595	2.54%	1.32%	2.18%
2	375.62272	120.56741	394.49833	0.32%	0.51%	0.24%
3	383.47378	122.87096	402.67780	1.77%	2.43%	1.83%
4	375.63226	120.57138	394.50862	0.31%	0.51%	0.24%
5	367.23121	121.51996	386.81502	2.54%	1.30%	2.18%
6	367.28968	118.09225	385.80758	2.53%	1.56%	2.44%
7	344.85626	120.70558	365.37061	8.48%	0.62%	7.61%
8	367.28069	118.08747	385.79756	2.53%	1.56%	2.44%
9	372.18173	122.60888	391.85734	1.23%	2.21%	0.91%
10	380.12370	123.91067	399.80981	0.88%	3.29%	1.10%
11	380.13910	123.90630	399.82309	0.88%	3.29%	1.11%
12	369.64868	122.06042	389.27996	1.90%	1.75%	1.56%
13	360.17736	115.71770	378.30981	4.41%	3.54%	4.33%
14	350.27690	114.48970	368.51296	7.04%	4.56%	6.81%
15	350.30185	114.48841	368.53627	7.03%	4.56%	6.80%
16	361.81629	115.35535	379.76030	3.98%	3.84%	3.97%
17	369.38106	120.93362	388.67378	1.97%	0.81%	1.71%
18	362.70468	123.52261	383.16122	3.74%	2.97%	3.11%
19	375.61285	120.57270	394.49055	0.32%	0.51%	0.24%
20	362.70636	123.52252	383.16278	3.74%	2.97%	3.11%
21	369.38109	120.93139	388.67312	1.97%	0.81%	1.71%

22	355.96567	106.04051	371.42449	5.53%	11.60%	6.07%
23	367.28456	118.09836	385.80458	2.53%	1.55%	2.44%
24	355.96320	106.04123	371.42232	5.53%	11.60%	6.07%
25	369.65327	122.08995	389.29358	1.90%	1.78%	1.56%
26	372.16827	122.63873	391.85390	1.23%	2.23%	0.91%
27	361.81994	115.37417	379.76949	3.98%	3.82%	3.96%
28	360.15907	115.74268	378.30005	4.42%	3.52%	4.34%
29	367.27265	121.55410	386.86509	2.53%	1.33%	2.17%
30	369.66163	122.09316	389.30253	1.90%	1.78%	1.55%
31	380.11731	123.93911	399.81255	0.88%	3.32%	1.10%
32	380.13506	123.93887	399.82935	0.88%	3.32%	1.11%
33	372.15623	122.64390	391.84409	1.24%	2.24%	0.91%
34	361.83536	115.35563	379.77855	3.97%	3.84%	3.96%
35	350.26585	114.52359	368.51298	7.04%	4.53%	6.81%
36	350.29801	114.49450	368.53451	7.04%	4.56%	6.80%
37	360.14422	115.74996	378.28814	4.42%	3.51%	4.34%
38	369.40233	120.95092	388.69938	1.97%	0.83%	1.71%
39	362.71196	123.54293	383.17466	3.74%	2.99%	3.10%
40	375.63307	120.58277	394.51288	0.31%	0.52%	0.24%
41	362.71421	123.55170	383.17962	3.74%	2.99%	3.10%
42	369.39603	120.94203	388.69063	1.97%	0.82%	1.71%
43	355.96468	106.05754	371.42840	5.53%	11.59%	6.07%
44	367.30139	118.11723	385.82637	2.52%	1.54%	2.43%
45	355.96206	106.04793	371.42315	5.53%	11.60%	6.07%
46	372.16299	122.62198	391.84364	1.23%	2.22%	0.91%
47	369.64486	122.07849	389.28200	1.90%	1.77%	1.56%
48	360.14849	115.73709	378.28826	4.42%	3.52%	4.34%
49	361.81268	115.36400	379.75948	3.98%	3.83%	3.97%
50	367.23563	121.52074	386.81947	2.54%	1.30%	2.18%
			Rata-rata:	3.09%	3.10%	2.94%

Iterasi 10				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	355.73418	108.58816	371.93843	5.59%	9.48%	5.94%
2	363.43955	108.34401	379.24495	3.55%	9.68%	4.10%
3	372.05042	108.24748	387.47779	1.26%	9.76%	2.01%
4	363.44758	108.34424	379.25271	3.55%	9.68%	4.09%
5	355.71626	108.57761	371.91821	5.60%	9.49%	5.95%
6	354.74893	104.68115	369.87153	5.85%	12.74%	6.47%
7	334.67731	109.62573	352.17425	11.18%	8.61%	10.94%
8	354.74110	104.68008	369.86371	5.86%	12.74%	6.47%
9	360.40484	110.46360	376.95339	4.35%	7.92%	4.68%
10	368.55027	110.78389	384.84071	2.19%	7.65%	2.68%
11	368.55974	110.77320	384.84670	2.19%	7.66%	2.68%
12	358.28658	110.26401	374.86988	4.92%	8.08%	5.20%
13	348.48754	103.12824	363.42674	7.52%	14.03%	8.10%
14	338.74624	103.08500	354.08407	10.10%	14.07%	10.46%
15	338.77529	103.07807	354.10985	10.09%	14.07%	10.45%
16	349.78356	102.67462	364.54165	7.17%	14.41%	7.81%
17	357.86220	108.02016	373.80973	5.03%	9.95%	5.47%
18	351.84888	113.32198	369.64781	6.62%	5.53%	6.52%

19	363.43392	108.35286	379.24208	3.55%	9.68%	4.10%
20	351.84902	113.32095	369.64763	6.62%	5.53%	6.52%
21	357.86429	108.01779	373.81104	5.03%	9.96%	5.47%
22	344.07673	95.21817	357.00882	8.69%	20.63%	9.72%
23	354.74558	104.69065	369.87100	5.86%	12.73%	6.47%
24	344.07591	95.22009	357.00854	8.69%	20.62%	9.72%
25	358.29033	110.28760	374.88040	4.91%	8.06%	5.20%
26	360.39362	110.49458	376.95174	4.36%	7.89%	4.68%
27	349.78119	102.68920	364.54349	7.17%	14.40%	7.81%
28	348.46202	103.15378	363.40952	7.52%	14.01%	8.10%
29	355.75791	108.59337	371.96265	5.59%	9.48%	5.94%
30	358.29717	110.28617	374.88652	4.91%	8.06%	5.20%
31	368.54276	110.81133	384.84142	2.19%	7.63%	2.68%
32	368.55647	110.80299	384.85214	2.19%	7.63%	2.68%
33	360.38395	110.50470	376.94546	4.36%	7.88%	4.68%
34	349.79690	102.66627	364.55210	7.17%	14.42%	7.81%
35	338.73632	103.11829	354.08428	10.10%	14.04%	10.46%
36	338.76448	103.07996	354.10006	10.10%	14.07%	10.46%
37	348.45154	103.16487	363.40262	7.53%	14.00%	8.10%
38	357.88554	108.02884	373.83457	5.02%	9.95%	5.46%
39	351.85492	113.33544	369.65769	6.62%	5.52%	6.52%
40	363.45312	108.35597	379.26137	3.54%	9.67%	4.09%
41	351.85959	113.34210	369.66418	6.62%	5.52%	6.52%
42	357.87872	108.02205	373.82608	5.02%	9.95%	5.47%
43	344.07375	95.23033	357.00919	8.69%	20.61%	9.72%
44	354.76494	104.70172	369.89270	5.85%	12.72%	6.46%
45	344.06885	95.22291	357.00249	8.69%	20.62%	9.72%
46	360.38626	110.48411	376.94163	4.36%	7.90%	4.68%
47	358.28196	110.28181	374.87070	4.92%	8.07%	5.20%
48	348.45391	103.15371	363.40173	7.53%	14.01%	8.10%
49	349.77445	102.68485	364.53580	7.17%	14.40%	7.82%
50	355.72117	108.58039	371.92372	5.60%	9.49%	5.95%
			Rata-rata:	5.98%	11.09%	6.43%

Kasus 3

Hasil Iterasi Steepest Descent R=1.25m; k = 1

	P Iterasi 1			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	206.50662	209.36976	294.07598	0.48%	0.90%	0.21%
2	207.79475	209.67475	295.19851	0.14%	1.05%	0.60%
3	208.90193	210.26348	296.39627	0.68%	1.33%	1.00%
4	207.79475	209.67475	295.19851	0.14%	1.05%	0.60%
5	206.50662	209.36976	294.07598	0.48%	0.90%	0.21%
6	204.81959	205.94613	290.45632	1.29%	0.75%	1.02%
7	204.54591	208.19284	291.86176	1.42%	0.33%	0.54%
8	204.81959	205.94613	290.45632	1.29%	0.75%	1.02%
9	207.33004	209.90936	295.03845	0.08%	1.16%	0.54%
10	208.26984	210.22021	295.92037	0.37%	1.31%	0.84%
11	208.26984	210.22021	295.92037	0.37%	1.31%	0.84%
12	207.26991	209.69610	294.84448	0.11%	1.06%	0.48%
13	205.65033	208.23093	292.66394	0.89%	0.35%	0.27%
14	204.99581	208.00619	292.04428	1.21%	0.24%	0.48%
15	204.99581	208.00619	292.04428	1.21%	0.24%	0.48%
16	206.05927	208.51249	293.15164	0.69%	0.49%	0.10%
17	206.76357	208.91922	293.93607	0.35%	0.68%	0.17%
18	207.38160	209.49118	294.77735	0.06%	0.96%	0.45%
19	207.79475	209.67475	295.19851	0.14%	1.05%	0.60%
20	207.38160	209.49118	294.77735	0.06%	0.96%	0.45%
21	206.76357	208.91922	293.93607	0.35%	0.68%	0.17%
22	204.94515	206.58342	290.99695	1.23%	0.44%	0.84%
23	204.81959	205.94613	290.45632	1.29%	0.75%	1.02%
24	204.94515	206.58342	290.99695	1.23%	0.44%	0.84%
25	207.26991	209.69610	294.84448	0.11%	1.06%	0.48%
26	207.33004	209.90936	295.03845	0.08%	1.16%	0.54%
27	206.05927	208.51249	293.15164	0.69%	0.49%	0.10%
28	205.65033	208.23093	292.66394	0.89%	0.35%	0.27%
29	206.50662	209.36976	294.07598	0.48%	0.90%	0.21%
30	207.26991	209.69610	294.84448	0.11%	1.06%	0.48%
31	208.26984	210.22021	295.92037	0.37%	1.31%	0.84%
32	208.26984	210.22021	295.92037	0.37%	1.31%	0.84%
33	207.33004	209.90936	295.03845	0.08%	1.16%	0.54%
34	206.05927	208.51249	293.15164	0.69%	0.49%	0.10%
35	204.99581	208.00619	292.04428	1.21%	0.24%	0.48%
36	204.99581	208.00619	292.04428	1.21%	0.24%	0.48%
37	205.65033	208.23093	292.66394	0.89%	0.35%	0.27%
38	206.76357	208.91922	293.93607	0.35%	0.68%	0.17%
39	207.38160	209.49118	294.77735	0.06%	0.96%	0.45%
40	207.79475	209.67475	295.19851	0.14%	1.05%	0.60%
41	207.38160	209.49118	294.77735	0.06%	0.96%	0.45%
42	206.76357	208.91922	293.93607	0.35%	0.68%	0.17%
43	204.94515	206.58342	290.99695	1.23%	0.44%	0.84%
44	204.81959	205.94613	290.45632	1.29%	0.75%	1.02%
45	204.94515	206.58342	290.99695	1.23%	0.44%	0.84%

46	207.33004	209.90936	295.03845	0.08%	1.16%	0.54%
47	207.26991	209.69610	294.84448	0.11%	1.06%	0.48%
48	205.65033	208.23093	292.66394	0.89%	0.35%	0.27%
49	206.05927	208.51249	293.15164	0.69%	0.49%	0.10%
50	206.50662	209.36976	294.07598	0.48%	0.90%	0.21%
			Rata-rata:	0.59%	0.79%	0.51%

	P Iterasi 2			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	206.59000	209.37000	294.13471	0.44%	0.90%	0.23%
2	207.18000	209.47000	294.62049	0.15%	0.95%	0.40%
3	208.06000	209.87000	295.52391	0.27%	1.14%	0.71%
4	207.18000	209.47000	294.62049	0.15%	0.95%	0.40%
5	206.59000	209.37000	294.13471	0.44%	0.90%	0.23%
6	205.44000	206.50000	291.28653	0.99%	0.48%	0.74%
7	205.53000	208.72000	292.92767	0.95%	0.59%	0.18%
8	205.44000	206.50000	291.28653	0.99%	0.48%	0.74%
9	207.09000	209.79000	294.78486	0.20%	1.10%	0.46%
10	207.51000	209.92000	295.17250	0.00%	1.17%	0.59%
11	207.51000	209.92000	295.17250	0.00%	1.17%	0.59%
12	207.03000	209.59000	294.60039	0.23%	1.01%	0.39%
13	205.98000	208.50000	293.08704	0.73%	0.48%	0.12%
14	205.83000	208.56000	293.02434	0.80%	0.51%	0.14%
15	205.83000	208.56000	293.02434	0.80%	0.51%	0.14%
16	206.38000	208.76000	293.55313	0.54%	0.61%	0.04%
17	206.77000	209.01000	294.00512	0.35%	0.73%	0.19%
18	206.91000	209.26000	294.28132	0.28%	0.85%	0.28%
19	207.18000	209.47000	294.62049	0.15%	0.95%	0.40%
20	206.91000	209.26000	294.28132	0.28%	0.85%	0.28%
21	206.77000	209.01000	294.00512	0.35%	0.73%	0.19%
22	205.49000	206.97000	291.65514	0.97%	0.26%	0.61%
23	205.44000	206.50000	291.28653	0.99%	0.48%	0.74%
24	205.49000	206.97000	291.65514	0.97%	0.26%	0.61%
25	207.03000	209.59000	294.60039	0.23%	1.01%	0.39%
26	207.09000	209.79000	294.78486	0.20%	1.10%	0.46%
27	206.38000	208.76000	293.55313	0.54%	0.61%	0.04%
28	205.98000	208.50000	293.08704	0.73%	0.48%	0.12%
29	206.59000	209.37000	294.13471	0.44%	0.90%	0.23%
30	207.03000	209.59000	294.60039	0.23%	1.01%	0.39%
31	207.51000	209.92000	295.17250	0.00%	1.17%	0.59%
32	207.51000	209.92000	295.17250	0.00%	1.17%	0.59%
33	207.09000	209.79000	294.78486	0.20%	1.10%	0.46%
34	206.38000	208.76000	293.55313	0.54%	0.61%	0.04%
35	205.83000	208.56000	293.02434	0.80%	0.51%	0.14%
36	205.83000	208.56000	293.02434	0.80%	0.51%	0.14%
37	205.98000	208.50000	293.08704	0.73%	0.48%	0.12%
38	206.77000	209.01000	294.00512	0.35%	0.73%	0.19%
39	206.91000	209.26000	294.28132	0.28%	0.85%	0.28%
40	207.18000	209.47000	294.62049	0.15%	0.95%	0.40%
41	206.91000	209.26000	294.28132	0.28%	0.85%	0.28%
42	206.77000	209.01000	294.00512	0.35%	0.73%	0.19%

43	205.49000	206.97000	291.65514	0.97%	0.26%	0.61%
44	205.44000	206.50000	291.28653	0.99%	0.48%	0.74%
45	205.49000	206.97000	291.65514	0.97%	0.26%	0.61%
46	207.09000	209.79000	294.78486	0.20%	1.10%	0.46%
47	207.03000	209.59000	294.60039	0.23%	1.01%	0.39%
48	205.98000	208.50000	293.08704	0.73%	0.48%	0.12%
49	206.38000	208.76000	293.55313	0.54%	0.61%	0.04%
50	206.59000	209.37000	294.13471	0.44%	0.90%	0.23%
			Rata-rata:	0.48%	0.76%	0.35%

	P Iterasi 3			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	206.75000	209.07000	294.03372	0.36%	0.76%	0.20%
2	206.97000	209.68000	294.62227	0.26%	1.05%	0.40%
3	208.19000	210.16000	295.82140	0.33%	1.28%	0.81%
4	206.97000	209.68000	294.62227	0.26%	1.05%	0.40%
5	206.75000	209.07000	294.03372	0.36%	0.76%	0.20%
6	204.84000	206.21000	290.65786	1.28%	0.62%	0.95%
7	205.57000	208.00000	292.44320	0.93%	0.24%	0.34%
8	204.84000	206.21000	290.65786	1.28%	0.62%	0.95%
9	207.09000	209.65000	294.68524	0.20%	1.04%	0.42%
10	207.45000	210.21000	295.33667	0.02%	1.31%	0.64%
11	207.45000	210.21000	295.33667	0.02%	1.31%	0.64%
12	207.00000	209.47000	294.49394	0.24%	0.95%	0.36%
13	205.74000	208.23000	292.72629	0.85%	0.35%	0.25%
14	205.53000	208.02000	292.42931	0.95%	0.25%	0.35%
15	205.53000	208.02000	292.42931	0.95%	0.25%	0.35%
16	206.15000	208.43000	293.15676	0.65%	0.45%	0.10%
17	206.51000	208.76000	293.64454	0.48%	0.61%	0.07%
18	206.95000	209.24000	294.29523	0.27%	0.84%	0.29%
19	206.97000	209.68000	294.62227	0.26%	1.05%	0.40%
20	206.95000	209.24000	294.29523	0.27%	0.84%	0.29%
21	206.51000	208.76000	293.64454	0.48%	0.61%	0.07%
22	205.22000	206.57000	291.18107	1.10%	0.45%	0.77%
23	204.84000	206.21000	290.65786	1.28%	0.62%	0.95%
24	205.22000	206.57000	291.18107	1.10%	0.45%	0.77%
25	207.00000	209.47000	294.49394	0.24%	0.95%	0.36%
26	207.09000	209.65000	294.68524	0.20%	1.04%	0.42%
27	206.15000	208.43000	293.15676	0.65%	0.45%	0.10%
28	205.74000	208.23000	292.72629	0.85%	0.35%	0.25%
29	206.75000	209.07000	294.03372	0.36%	0.76%	0.20%
30	207.00000	209.47000	294.49394	0.24%	0.95%	0.36%
31	207.45000	210.21000	295.33667	0.02%	1.31%	0.64%
32	207.45000	210.21000	295.33667	0.02%	1.31%	0.64%
33	207.09000	209.65000	294.68524	0.20%	1.04%	0.42%
34	206.15000	208.43000	293.15676	0.65%	0.45%	0.10%
35	205.53000	208.02000	292.42931	0.95%	0.25%	0.35%
36	205.53000	208.02000	292.42931	0.95%	0.25%	0.35%
37	205.74000	208.23000	292.72629	0.85%	0.35%	0.25%
38	206.51000	208.76000	293.64454	0.48%	0.61%	0.07%
39	206.95000	209.24000	294.29523	0.27%	0.84%	0.29%

40	206.97000	209.68000	294.62227	0.26%	1.05%	0.40%
41	206.95000	209.24000	294.29523	0.27%	0.84%	0.29%
42	206.51000	208.76000	293.64454	0.48%	0.61%	0.07%
43	205.22000	206.57000	291.18107	1.10%	0.45%	0.77%
44	204.84000	206.21000	290.65786	1.28%	0.62%	0.95%
45	205.22000	206.57000	291.18107	1.10%	0.45%	0.77%
46	207.09000	209.65000	294.68524	0.20%	1.04%	0.42%
47	207.00000	209.47000	294.49394	0.24%	0.95%	0.36%
48	205.74000	208.23000	292.72629	0.85%	0.35%	0.25%
49	206.15000	208.43000	293.15676	0.65%	0.45%	0.10%
50	206.75000	209.07000	294.03372	0.36%	0.76%	0.20%
			Rata-rata:	0.56%	0.72%	0.41%

	P Iterasi 4			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.06000	209.12000	294.28731	0.21%	0.78%	0.29%
2	207.25000	209.55000	294.72659	0.12%	0.99%	0.44%
3	208.55000	209.86000	295.86200	0.51%	1.14%	0.82%
4	207.25000	209.55000	294.72659	0.12%	0.99%	0.44%
5	207.06000	209.12000	294.28731	0.21%	0.78%	0.29%
6	205.16000	206.65000	291.19555	1.13%	0.41%	0.77%
7	205.96000	208.40000	293.00185	0.74%	0.43%	0.15%
8	205.16000	206.65000	291.19555	1.13%	0.41%	0.77%
9	207.36000	209.61000	294.84661	0.07%	1.02%	0.48%
10	207.78000	209.99000	295.41213	0.13%	1.20%	0.67%
11	207.78000	209.99000	295.41213	0.13%	1.20%	0.67%
12	207.28000	209.43000	294.66239	0.11%	0.93%	0.41%
13	206.05000	208.47000	293.11490	0.70%	0.47%	0.11%
14	205.89000	208.45000	292.98822	0.78%	0.46%	0.16%
15	205.89000	208.45000	292.98822	0.78%	0.46%	0.16%
16	206.45000	208.66000	293.53126	0.51%	0.56%	0.03%
17	206.76000	208.88000	293.90569	0.36%	0.67%	0.16%
18	207.25000	209.10000	294.40681	0.12%	0.77%	0.33%
19	207.25000	209.55000	294.72659	0.12%	0.99%	0.44%
20	207.25000	209.10000	294.40681	0.12%	0.77%	0.33%
21	206.76000	208.88000	293.90569	0.36%	0.67%	0.16%
22	205.56000	206.90000	291.65480	0.93%	0.29%	0.61%
23	205.16000	206.65000	291.19555	1.13%	0.41%	0.77%
24	205.56000	206.90000	291.65480	0.93%	0.29%	0.61%
25	207.28000	209.43000	294.66239	0.11%	0.93%	0.41%
26	207.36000	209.61000	294.84661	0.07%	1.02%	0.48%
27	206.45000	208.66000	293.53126	0.51%	0.56%	0.03%
28	206.05000	208.47000	293.11490	0.70%	0.47%	0.11%
29	207.06000	209.12000	294.28731	0.21%	0.78%	0.29%
30	207.28000	209.43000	294.66239	0.11%	0.93%	0.41%
31	207.78000	209.99000	295.41213	0.13%	1.20%	0.67%
32	207.78000	209.99000	295.41213	0.13%	1.20%	0.67%
33	207.36000	209.61000	294.84661	0.07%	1.02%	0.48%
34	206.45000	208.66000	293.53126	0.51%	0.56%	0.03%
35	205.89000	208.45000	292.98822	0.78%	0.46%	0.16%
36	205.89000	208.45000	292.98822	0.78%	0.46%	0.16%

37	206.05000	208.47000	293.11490	0.70%	0.47%	0.11%
38	206.76000	208.88000	293.90569	0.36%	0.67%	0.16%
39	207.25000	209.10000	294.40681	0.12%	0.77%	0.33%
40	207.25000	209.55000	294.72659	0.12%	0.99%	0.44%
41	207.25000	209.10000	294.40681	0.12%	0.77%	0.33%
42	206.76000	208.88000	293.90569	0.36%	0.67%	0.16%
43	205.56000	206.90000	291.65480	0.93%	0.29%	0.61%
44	205.16000	206.65000	291.19555	1.13%	0.41%	0.77%
45	205.56000	206.90000	291.65480	0.93%	0.29%	0.61%
46	207.36000	209.61000	294.84661	0.07%	1.02%	0.48%
47	207.28000	209.43000	294.66239	0.11%	0.93%	0.41%
48	206.05000	208.47000	293.11490	0.70%	0.47%	0.11%
49	206.45000	208.66000	293.53126	0.51%	0.56%	0.03%
50	207.06000	209.12000	294.28731	0.21%	0.78%	0.29%
			Rata-rata:	0.44%	0.71%	0.37%

	P Iterasi 5			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	206.86000	209.09000	294.12529	0.31%	0.77%	0.23%
2	206.85000	209.57000	294.45969	0.31%	1.00%	0.34%
3	208.31000	209.82000	295.66449	0.39%	1.12%	0.75%
4	206.85000	209.57000	294.45969	0.31%	1.00%	0.34%
5	206.86000	209.09000	294.12529	0.31%	0.77%	0.23%
6	204.91000	206.83000	291.14731	1.25%	0.32%	0.78%
7	206.00000	208.42000	293.04419	0.72%	0.44%	0.14%
8	204.91000	206.83000	291.14731	1.25%	0.32%	0.78%
9	207.04000	209.57000	294.59319	0.22%	1.00%	0.39%
10	207.45000	209.99000	295.18012	0.02%	1.20%	0.59%
11	207.45000	209.99000	295.18012	0.02%	1.20%	0.59%
12	206.95000	209.41000	294.41612	0.27%	0.92%	0.33%
13	205.80000	208.57000	293.01038	0.82%	0.52%	0.15%
14	205.79000	208.55000	292.98912	0.82%	0.51%	0.16%
15	205.79000	208.55000	292.98912	0.82%	0.51%	0.16%
16	206.21000	208.74000	293.41941	0.62%	0.60%	0.01%
17	206.39000	208.91000	293.66685	0.53%	0.68%	0.07%
18	206.93000	209.06000	294.15321	0.27%	0.75%	0.24%
19	206.85000	209.57000	294.45969	0.31%	1.00%	0.34%
20	206.93000	209.06000	294.15321	0.27%	0.75%	0.24%
21	206.39000	208.91000	293.66685	0.53%	0.68%	0.07%
22	205.40000	207.02000	291.62723	1.01%	0.23%	0.62%
23	204.91000	206.83000	291.14731	1.25%	0.32%	0.78%
24	205.40000	207.02000	291.62723	1.01%	0.23%	0.62%
25	206.95000	209.41000	294.41612	0.27%	0.92%	0.33%
26	207.04000	209.57000	294.59319	0.22%	1.00%	0.39%
27	206.21000	208.74000	293.41941	0.62%	0.60%	0.01%
28	205.80000	208.57000	293.01038	0.82%	0.52%	0.15%
29	206.86000	209.09000	294.12529	0.31%	0.77%	0.23%
30	206.95000	209.41000	294.41612	0.27%	0.92%	0.33%
31	207.45000	209.99000	295.18012	0.02%	1.20%	0.59%
32	207.45000	209.99000	295.18012	0.02%	1.20%	0.59%
33	207.04000	209.57000	294.59319	0.22%	1.00%	0.39%

34	206.21000	208.74000	293.41941	0.62%	0.60%	0.01%
35	205.79000	208.55000	292.98912	0.82%	0.51%	0.16%
36	205.79000	208.55000	292.98912	0.82%	0.51%	0.16%
37	205.80000	208.57000	293.01038	0.82%	0.52%	0.15%
38	206.39000	208.91000	293.66685	0.53%	0.68%	0.07%
39	206.93000	209.06000	294.15321	0.27%	0.75%	0.24%
40	206.85000	209.57000	294.45969	0.31%	1.00%	0.34%
41	206.93000	209.06000	294.15321	0.27%	0.75%	0.24%
42	206.39000	208.91000	293.66685	0.53%	0.68%	0.07%
43	205.40000	207.02000	291.62723	1.01%	0.23%	0.62%
44	204.91000	206.83000	291.14731	1.25%	0.32%	0.78%
45	205.40000	207.02000	291.62723	1.01%	0.23%	0.62%
46	207.04000	209.57000	294.59319	0.22%	1.00%	0.39%
47	206.95000	209.41000	294.41612	0.27%	0.92%	0.33%
48	205.80000	208.57000	293.01038	0.82%	0.52%	0.15%
49	206.21000	208.74000	293.41941	0.62%	0.60%	0.01%
50	206.86000	209.09000	294.12529	0.31%	0.77%	0.23%
			Rata-rata:	0.54%	0.71%	0.33%

	P Iterasi 6			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.14935	208.96389	294.23929	0.17%	0.71%	0.27%
2	207.14563	209.61756	294.70126	0.17%	1.02%	0.43%
3	208.67435	209.77996	295.89291	0.57%	1.10%	0.83%
4	207.14563	209.61756	294.70126	0.17%	1.02%	0.43%
5	207.14935	208.96389	294.23929	0.17%	0.71%	0.27%
6	205.17722	206.70460	291.24643	1.12%	0.38%	0.75%
7	206.27327	208.04065	292.96684	0.59%	0.26%	0.16%
8	205.17722	206.70460	291.24643	1.12%	0.38%	0.75%
9	207.30253	209.53448	294.75250	0.10%	0.98%	0.44%
10	207.78407	210.00827	295.42798	0.14%	1.21%	0.67%
11	207.78407	210.00827	295.42798	0.14%	1.21%	0.67%
12	207.21179	209.37838	294.57771	0.14%	0.91%	0.38%
13	206.08924	208.46976	293.14231	0.68%	0.47%	0.10%
14	206.06087	208.28507	292.99104	0.69%	0.38%	0.16%
15	206.06087	208.28507	292.99104	0.69%	0.38%	0.16%
16	206.48282	208.62049	293.52625	0.49%	0.54%	0.03%
17	206.63313	208.87722	293.81447	0.42%	0.66%	0.12%
18	207.22909	209.04069	294.34997	0.13%	0.74%	0.31%
19	207.14563	209.61756	294.70126	0.17%	1.02%	0.43%
20	207.22909	209.04069	294.34997	0.13%	0.74%	0.31%
21	206.63313	208.87722	293.81447	0.42%	0.66%	0.12%
22	205.69552	206.84661	291.71248	0.87%	0.31%	0.59%
23	205.17722	206.70460	291.24643	1.12%	0.38%	0.75%
24	205.69552	206.84661	291.71248	0.87%	0.31%	0.59%
25	207.21179	209.37838	294.57771	0.14%	0.91%	0.38%
26	207.30253	209.53448	294.75250	0.10%	0.98%	0.44%
27	206.48282	208.62049	293.52625	0.49%	0.54%	0.03%
28	206.08924	208.46976	293.14231	0.68%	0.47%	0.10%
29	207.14935	208.96389	294.23929	0.17%	0.71%	0.27%
30	207.21179	209.37838	294.57771	0.14%	0.91%	0.38%

31	207.78407	210.00827	295.42798	0.14%	1.21%	0.67%
32	207.78407	210.00827	295.42798	0.14%	1.21%	0.67%
33	207.30253	209.53448	294.75250	0.10%	0.98%	0.44%
34	206.48282	208.62049	293.52625	0.49%	0.54%	0.03%
35	206.06087	208.28507	292.99104	0.69%	0.38%	0.16%
36	206.06087	208.28507	292.99104	0.69%	0.38%	0.16%
37	206.08924	208.46976	293.14231	0.68%	0.47%	0.10%
38	206.63313	208.87722	293.81447	0.42%	0.66%	0.12%
39	207.22909	209.04069	294.34997	0.13%	0.74%	0.31%
40	207.14563	209.61756	294.70126	0.17%	1.02%	0.43%
41	207.22909	209.04069	294.34997	0.13%	0.74%	0.31%
42	206.63313	208.87722	293.81447	0.42%	0.66%	0.12%
43	205.69552	206.84661	291.71248	0.87%	0.31%	0.59%
44	205.17722	206.70460	291.24643	1.12%	0.38%	0.75%
45	205.69552	206.84661	291.71248	0.87%	0.31%	0.59%
46	207.30253	209.53448	294.75250	0.10%	0.98%	0.44%
47	207.21179	209.37838	294.57771	0.14%	0.91%	0.38%
48	206.08924	208.46976	293.14231	0.68%	0.47%	0.10%
49	206.48282	208.62049	293.52625	0.49%	0.54%	0.03%
50	207.14935	208.96389	294.23929	0.17%	0.71%	0.27%
			Rata-rata:	0.43%	0.69%	0.36%

P Iterasi 7				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	206.98504	209.05093	294.18548	0.25%	0.75%	0.25%
2	206.93181	209.76888	294.65871	0.27%	1.09%	0.41%
3	208.62941	209.83209	295.89818	0.54%	1.12%	0.83%
4	206.93181	209.76888	294.65871	0.27%	1.09%	0.41%
5	206.98504	209.05093	294.18548	0.25%	0.75%	0.25%
6	204.86219	206.88990	291.15622	1.27%	0.29%	0.78%
7	206.08112	208.00808	292.80845	0.68%	0.24%	0.22%
8	204.86219	206.88990	291.15622	1.27%	0.29%	0.78%
9	207.08372	209.64444	294.67687	0.20%	1.03%	0.42%
10	207.65630	210.11994	295.41755	0.08%	1.26%	0.67%
11	207.65630	210.11994	295.41755	0.08%	1.26%	0.67%
12	206.99029	209.49798	294.50702	0.25%	0.96%	0.36%
13	205.85467	208.63401	293.09434	0.79%	0.55%	0.12%
14	205.80819	208.35477	292.86297	0.82%	0.41%	0.20%
15	205.80819	208.35477	292.86297	0.82%	0.41%	0.20%
16	206.24255	208.76461	293.45980	0.61%	0.61%	0.00%
17	206.34167	209.03202	293.71972	0.56%	0.74%	0.09%
18	207.06507	209.14921	294.31163	0.21%	0.79%	0.29%
19	206.93181	209.76888	294.65871	0.27%	1.09%	0.41%
20	207.06507	209.14921	294.31163	0.21%	0.79%	0.29%
21	206.34167	209.03202	293.71972	0.56%	0.74%	0.09%
22	205.48339	206.98772	291.66306	0.97%	0.25%	0.61%
23	204.86219	206.88990	291.15622	1.27%	0.29%	0.78%
24	205.48339	206.98772	291.66306	0.97%	0.25%	0.61%
25	206.99029	209.49798	294.50702	0.25%	0.96%	0.36%
26	207.08372	209.64444	294.67687	0.20%	1.03%	0.42%
27	206.24255	208.76461	293.45980	0.61%	0.61%	0.00%

28	205.85467	208.63401	293.09434	0.79%	0.55%	0.12%
29	206.98504	209.05093	294.18548	0.25%	0.75%	0.25%
30	206.99029	209.49798	294.50702	0.25%	0.96%	0.36%
31	207.65630	210.11994	295.41755	0.08%	1.26%	0.67%
32	207.65630	210.11994	295.41755	0.08%	1.26%	0.67%
33	207.08372	209.64444	294.67687	0.20%	1.03%	0.42%
34	206.24255	208.76461	293.45980	0.61%	0.61%	0.00%
35	205.80819	208.35477	292.86297	0.82%	0.41%	0.20%
36	205.80819	208.35477	292.86297	0.82%	0.41%	0.20%
37	205.85467	208.63401	293.09434	0.79%	0.55%	0.12%
38	206.34167	209.03202	293.71972	0.56%	0.74%	0.09%
39	207.06507	209.14921	294.31163	0.21%	0.79%	0.29%
40	206.93181	209.76888	294.65871	0.27%	1.09%	0.41%
41	207.06507	209.14921	294.31163	0.21%	0.79%	0.29%
42	206.34167	209.03202	293.71972	0.56%	0.74%	0.09%
43	205.48339	206.98772	291.66306	0.97%	0.25%	0.61%
44	204.86219	206.88990	291.15622	1.27%	0.29%	0.78%
45	205.48339	206.98772	291.66306	0.97%	0.25%	0.61%
46	207.08372	209.64444	294.67687	0.20%	1.03%	0.42%
47	206.99029	209.49798	294.50702	0.25%	0.96%	0.36%
48	205.85467	208.63401	293.09434	0.79%	0.55%	0.12%
49	206.24255	208.76461	293.45980	0.61%	0.61%	0.00%
50	206.98504	209.05093	294.18548	0.25%	0.75%	0.25%
			Rata-rata:	0.53%	0.73%	0.36%

P Iterasi 8				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.23413	208.85341	294.22055	0.13%	0.65%	0.26%
2	207.12012	209.62006	294.68511	0.18%	1.02%	0.42%
3	208.81716	209.53352	295.81903	0.63%	0.98%	0.81%
4	207.12012	209.62006	294.68511	0.18%	1.02%	0.42%
5	207.23413	208.85341	294.22055	0.13%	0.65%	0.26%
6	205.11685	206.83454	291.29615	1.15%	0.32%	0.73%
7	206.29252	207.79162	292.80362	0.58%	0.14%	0.22%
8	205.11685	206.83454	291.29615	1.15%	0.32%	0.73%
9	207.28877	209.48430	294.70715	0.10%	0.96%	0.43%
10	207.84743	209.90041	295.39590	0.17%	1.16%	0.66%
11	207.84743	209.90041	295.39590	0.17%	1.16%	0.66%
12	207.19897	209.34404	294.54430	0.15%	0.89%	0.37%
13	206.12892	208.51609	293.20316	0.66%	0.49%	0.08%
14	206.04249	208.21488	292.92822	0.70%	0.34%	0.18%
15	206.04249	208.21488	292.92822	0.70%	0.34%	0.18%
16	206.50338	208.63884	293.55376	0.48%	0.55%	0.04%
17	206.55980	208.93587	293.80461	0.45%	0.69%	0.12%
18	207.27524	208.95738	294.32331	0.11%	0.70%	0.30%
19	207.12012	209.62006	294.68511	0.18%	1.02%	0.42%
20	207.27524	208.95738	294.32331	0.11%	0.70%	0.30%
21	206.55980	208.93587	293.80461	0.45%	0.69%	0.12%
22	205.76993	206.85238	291.76904	0.83%	0.31%	0.57%
23	205.11685	206.83454	291.29615	1.15%	0.32%	0.73%
24	205.76993	206.85238	291.76904	0.83%	0.31%	0.57%

25	207.19897	209.34404	294.54430	0.15%	0.89%	0.37%
26	207.28877	209.48430	294.70715	0.10%	0.96%	0.43%
27	206.50338	208.63884	293.55376	0.48%	0.55%	0.04%
28	206.12892	208.51609	293.20316	0.66%	0.49%	0.08%
29	207.23413	208.85341	294.22055	0.13%	0.65%	0.26%
30	207.19897	209.34404	294.54430	0.15%	0.89%	0.37%
31	207.84743	209.90041	295.39590	0.17%	1.16%	0.66%
32	207.84743	209.90041	295.39590	0.17%	1.16%	0.66%
33	207.28877	209.48430	294.70715	0.10%	0.96%	0.43%
34	206.50338	208.63884	293.55376	0.48%	0.55%	0.04%
35	206.04249	208.21488	292.92822	0.70%	0.34%	0.18%
36	206.04249	208.21488	292.92822	0.70%	0.34%	0.18%
37	206.12892	208.51609	293.20316	0.66%	0.49%	0.08%
38	206.55980	208.93587	293.80461	0.45%	0.69%	0.12%
39	207.27524	208.95738	294.32331	0.11%	0.70%	0.30%
40	207.12012	209.62006	294.68511	0.18%	1.02%	0.42%
41	207.27524	208.95738	294.32331	0.11%	0.70%	0.30%
42	206.55980	208.93587	293.80461	0.45%	0.69%	0.12%
43	205.76993	206.85238	291.76904	0.83%	0.31%	0.57%
44	205.11685	206.83454	291.29615	1.15%	0.32%	0.73%
45	205.76993	206.85238	291.76904	0.83%	0.31%	0.57%
46	207.28877	209.48430	294.70715	0.10%	0.96%	0.43%
47	207.19897	209.34404	294.54430	0.15%	0.89%	0.37%
48	206.12892	208.51609	293.20316	0.66%	0.49%	0.08%
49	206.50338	208.63884	293.55376	0.48%	0.55%	0.04%
50	207.23413	208.85341	294.22055	0.13%	0.65%	0.26%
			Rata-rata:	0.43%	0.67%	0.35%

	P Iterasi 9			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.1198	208.96771	294.22123	0.18%	0.71%	0.26%
2	206.8878	209.8283	294.67012	0.30%	1.12%	0.42%
3	208.6649	209.62714	295.77790	0.56%	1.03%	0.79%
4	206.8878	209.8283	294.67012	0.30%	1.12%	0.42%
5	207.1198	208.96771	294.22123	0.18%	0.71%	0.26%
6	204.9195	207.0375	291.30141	1.24%	0.22%	0.73%
7	206.1484	207.79246	292.70273	0.65%	0.14%	0.25%
8	204.9195	207.0375	291.30141	1.24%	0.22%	0.73%
9	207.0961	209.64567	294.68643	0.19%	1.03%	0.42%
10	207.6542	210.06161	295.37462	0.07%	1.23%	0.66%
11	207.6542	210.06161	295.37462	0.07%	1.23%	0.66%
12	207.0064	209.51397	294.52969	0.24%	0.97%	0.37%
13	205.9928	208.69434	293.23434	0.73%	0.58%	0.07%
14	205.8748	208.3103	292.87814	0.78%	0.39%	0.19%
15	205.8748	208.3103	292.87814	0.78%	0.39%	0.19%
16	206.3577	208.80091	293.56657	0.55%	0.63%	0.04%
17	206.3471	209.133	293.79542	0.56%	0.79%	0.12%
18	207.1042	209.1219	294.31973	0.19%	0.78%	0.30%
19	206.8878	209.8283	294.67012	0.30%	1.12%	0.42%
20	207.1042	209.1219	294.31973	0.19%	0.78%	0.30%
21	206.3471	209.133	293.79542	0.56%	0.79%	0.12%

22	205.6631	207.0025	291.80017	0.89%	0.24%	0.56%
23	204.9195	207.0375	291.30141	1.24%	0.22%	0.73%
24	205.6631	207.0025	291.80017	0.89%	0.24%	0.56%
25	207.0064	209.51397	294.52969	0.24%	0.97%	0.37%
26	207.0961	209.64567	294.68643	0.19%	1.03%	0.42%
27	206.3577	208.80091	293.56657	0.55%	0.63%	0.04%
28	205.9928	208.69434	293.23434	0.73%	0.58%	0.07%
29	207.1198	208.96771	294.22123	0.18%	0.71%	0.26%
30	207.0064	209.51397	294.52969	0.24%	0.97%	0.37%
31	207.6542	210.06161	295.37462	0.07%	1.23%	0.66%
32	207.6542	210.06161	295.37462	0.07%	1.23%	0.66%
33	207.0961	209.64567	294.68643	0.19%	1.03%	0.42%
34	206.3577	208.80091	293.56657	0.55%	0.63%	0.04%
35	205.8748	208.3103	292.87814	0.78%	0.39%	0.19%
36	205.8748	208.3103	292.87814	0.78%	0.39%	0.19%
37	205.9928	208.69434	293.23434	0.73%	0.58%	0.07%
38	206.3471	209.133	293.79542	0.56%	0.79%	0.12%
39	207.1042	209.1219	294.31973	0.19%	0.78%	0.30%
40	206.8878	209.8283	294.67012	0.30%	1.12%	0.42%
41	207.1042	209.1219	294.31973	0.19%	0.78%	0.30%
42	206.3471	209.133	293.79542	0.56%	0.79%	0.12%
43	205.6631	207.0025	291.80017	0.89%	0.24%	0.56%
44	204.9195	207.0375	291.30141	1.24%	0.22%	0.73%
45	205.6631	207.0025	291.80017	0.89%	0.24%	0.56%
46	207.0961	209.64567	294.68643	0.19%	1.03%	0.42%
47	207.0064	209.51397	294.52969	0.24%	0.97%	0.37%
48	205.9928	208.69434	293.23434	0.73%	0.58%	0.07%
49	206.3577	208.80091	293.56657	0.55%	0.63%	0.04%
50	207.1198	208.96771	294.22123	0.18%	0.71%	0.26%
				0.50%	0.72%	0.35%

P Iterasi 10				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.31081	208.72301	294.18203	0.09%	0.59%	0.25%
2	207.08726	209.69514	294.71543	0.20%	1.06%	0.43%
3	208.85521	209.38584	295.74132	0.65%	0.91%	0.78%
4	207.08726	209.69514	294.71543	0.20%	1.06%	0.43%
5	207.31081	208.72301	294.18203	0.09%	0.59%	0.25%
6	205.07773	206.91440	291.32532	1.17%	0.28%	0.72%
7	206.21960	207.55237	292.58248	0.62%	0.03%	0.30%
8	205.07773	206.91440	291.32532	1.17%	0.28%	0.72%
9	207.28085	209.46619	294.68871	0.11%	0.95%	0.42%
10	207.85598	209.88075	295.38794	0.17%	1.15%	0.66%
11	207.85598	209.88075	295.38794	0.17%	1.15%	0.66%
12	207.19578	209.33914	294.53856	0.15%	0.89%	0.37%
13	206.19191	208.50461	293.23928	0.63%	0.48%	0.07%
14	205.98849	208.12398	292.82563	0.73%	0.30%	0.21%
15	205.98849	208.12398	292.82563	0.73%	0.30%	0.21%
16	206.54266	208.60694	293.55873	0.46%	0.53%	0.04%
17	206.52602	208.98723	293.81739	0.47%	0.72%	0.13%
18	207.31505	208.93324	294.33421	0.09%	0.69%	0.30%

19	207.08726	209.69514	294.71543	0.20%	1.06%	0.43%
20	207.31505	208.93324	294.33421	0.09%	0.69%	0.30%
21	206.52602	208.98723	293.81739	0.47%	0.72%	0.13%
22	205.85447	206.79330	291.78679	0.79%	0.34%	0.57%
23	205.07773	206.91440	291.32532	1.17%	0.28%	0.72%
24	205.85447	206.79330	291.78679	0.79%	0.34%	0.57%
25	207.19578	209.33914	294.53856	0.15%	0.89%	0.37%
26	207.28085	209.46619	294.68871	0.11%	0.95%	0.42%
27	206.54266	208.60694	293.55873	0.46%	0.53%	0.04%
28	206.19191	208.50461	293.23928	0.63%	0.48%	0.07%
29	207.31081	208.72301	294.18203	0.09%	0.59%	0.25%
30	207.19578	209.33914	294.53856	0.15%	0.89%	0.37%
31	207.85598	209.88075	295.38794	0.17%	1.15%	0.66%
32	207.85598	209.88075	295.38794	0.17%	1.15%	0.66%
33	207.28085	209.46619	294.68871	0.11%	0.95%	0.42%
34	206.54266	208.60694	293.55873	0.46%	0.53%	0.04%
35	205.98849	208.12398	292.82563	0.73%	0.30%	0.21%
36	205.98849	208.12398	292.82563	0.73%	0.30%	0.21%
37	206.19191	208.50461	293.23928	0.63%	0.48%	0.07%
38	206.52602	208.98723	293.81739	0.47%	0.72%	0.13%
39	207.31505	208.93324	294.33421	0.09%	0.69%	0.30%
40	207.08726	209.69514	294.71543	0.20%	1.06%	0.43%
41	207.31505	208.93324	294.33421	0.09%	0.69%	0.30%
42	206.52602	208.98723	293.81739	0.47%	0.72%	0.13%
43	205.85447	206.79330	291.78679	0.79%	0.34%	0.57%
44	205.07773	206.91440	291.32532	1.17%	0.28%	0.72%
45	205.85447	206.79330	291.78679	0.79%	0.34%	0.57%
46	207.28085	209.46619	294.68871	0.11%	0.95%	0.42%
47	207.19578	209.33914	294.53856	0.15%	0.89%	0.37%
48	206.19191	208.50461	293.23928	0.63%	0.48%	0.07%
49	206.54266	208.60694	293.55873	0.46%	0.53%	0.04%
50	207.31081	208.72301	294.18203	0.09%	0.59%	0.25%
			Rata-rata:	0.43%	0.66%	0.36%

	P Iterasi 11			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.22441	208.83480	294.20049	0.13%	0.64%	0.26%
2	206.92693	209.89993	294.74860	0.28%	1.16%	0.44%
3	208.74420	209.47487	295.72599	0.60%	0.95%	0.78%
4	206.92693	209.89993	294.74860	0.28%	1.16%	0.44%
5	207.22441	208.83480	294.20049	0.13%	0.64%	0.26%
6	204.91756	207.16415	291.39010	1.24%	0.16%	0.70%
7	206.06079	207.66542	292.55081	0.69%	0.08%	0.31%
8	204.91756	207.16415	291.39010	1.24%	0.16%	0.70%
9	207.14092	209.62750	294.70502	0.17%	1.03%	0.43%
10	207.72253	210.03687	295.40504	0.11%	1.22%	0.67%
11	207.72253	210.03687	295.40504	0.11%	1.22%	0.67%
12	207.05809	209.50735	294.56134	0.21%	0.97%	0.38%
13	206.09206	208.68809	293.29961	0.68%	0.57%	0.05%
14	205.83203	208.30229	292.84239	0.80%	0.39%	0.21%
15	205.83203	208.30229	292.84239	0.80%	0.39%	0.21%

16	206.43080	208.77875	293.60218	0.52%	0.62%	0.05%
17	206.36798	209.18823	293.84938	0.55%	0.81%	0.14%
18	207.20623	209.09458	294.37215	0.14%	0.77%	0.31%
19	206.92693	209.89993	294.74860	0.28%	1.16%	0.44%
20	207.20623	209.09458	294.37215	0.14%	0.77%	0.31%
21	206.36798	209.18823	293.84938	0.55%	0.81%	0.14%
22	205.77504	206.96880	291.85519	0.83%	0.26%	0.54%
23	204.91756	207.16415	291.39010	1.24%	0.16%	0.70%
24	205.77504	206.96880	291.85519	0.83%	0.26%	0.54%
25	207.05809	209.50735	294.56134	0.21%	0.97%	0.38%
26	207.14092	209.62750	294.70502	0.17%	1.03%	0.43%
27	206.43080	208.77875	293.60218	0.52%	0.62%	0.05%
28	206.09206	208.68809	293.29961	0.68%	0.57%	0.05%
29	207.22441	208.83480	294.20049	0.13%	0.64%	0.26%
30	207.05809	209.50735	294.56134	0.21%	0.97%	0.38%
31	207.72253	210.03687	295.40504	0.11%	1.22%	0.67%
32	207.72253	210.03687	295.40504	0.11%	1.22%	0.67%
33	207.14092	209.62750	294.70502	0.17%	1.03%	0.43%
34	206.43080	208.77875	293.60218	0.52%	0.62%	0.05%
35	205.83203	208.30229	292.84239	0.80%	0.39%	0.21%
36	205.83203	208.30229	292.84239	0.80%	0.39%	0.21%
37	206.09206	208.68809	293.29961	0.68%	0.57%	0.05%
38	206.36798	209.18823	293.84938	0.55%	0.81%	0.14%
39	207.20623	209.09458	294.37215	0.14%	0.77%	0.31%
40	206.92693	209.89993	294.74860	0.28%	1.16%	0.44%
41	207.20623	209.09458	294.37215	0.14%	0.77%	0.31%
42	206.36798	209.18823	293.84938	0.55%	0.81%	0.14%
43	205.77504	206.96880	291.85519	0.83%	0.26%	0.54%
44	204.91756	207.16415	291.39010	1.24%	0.16%	0.70%
45	205.77504	206.96880	291.85519	0.83%	0.26%	0.54%
46	207.14092	209.62750	294.70502	0.17%	1.03%	0.43%
47	207.05809	209.50735	294.56134	0.21%	0.97%	0.38%
48	206.09206	208.68809	293.29961	0.68%	0.57%	0.05%
49	206.43080	208.77875	293.60218	0.52%	0.62%	0.05%
50	207.22441	208.83480	294.20049	0.13%	0.64%	0.26%
			Rata-rata:	0.48%	0.71%	0.36%

P Iterasi 12				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.34696	208.57778	294.10449	0.07%	0.52%	0.22%
2	207.05888	209.75639	294.73907	0.21%	1.09%	0.44%
3	208.84303	209.24052	295.62985	0.65%	0.84%	0.74%
4	207.05888	209.75639	294.73907	0.21%	1.09%	0.44%
5	207.34696	208.57778	294.10449	0.07%	0.52%	0.22%
6	205.07902	207.02203	291.40269	1.17%	0.23%	0.70%
7	206.16293	207.44205	292.46428	0.64%	0.03%	0.34%
8	205.07902	207.02203	291.40269	1.17%	0.23%	0.70%
9	207.25943	209.43747	294.65323	0.12%	0.93%	0.41%
10	207.84532	209.85303	295.36075	0.17%	1.13%	0.65%
11	207.84532	209.85303	295.36075	0.17%	1.13%	0.65%
12	207.18161	209.32009	294.51506	0.15%	0.88%	0.36%

13	206.24777	208.47487	293.25742	0.60%	0.47%	0.07%
14	205.96657	208.11399	292.80311	0.74%	0.30%	0.22%
15	205.96657	208.11399	292.80311	0.74%	0.30%	0.22%
16	206.57274	208.56500	293.55009	0.45%	0.51%	0.03%
17	206.49544	209.02464	293.82251	0.48%	0.73%	0.13%
18	207.34834	208.89440	294.33009	0.07%	0.67%	0.30%
19	207.05888	209.75639	294.73907	0.21%	1.09%	0.44%
20	207.34834	208.89440	294.33009	0.07%	0.67%	0.30%
21	206.49544	209.02464	293.82251	0.48%	0.73%	0.13%
22	205.94479	206.73725	291.81081	0.75%	0.37%	0.56%
23	205.07902	207.02203	291.40269	1.17%	0.23%	0.70%
24	205.94479	206.73725	291.81081	0.75%	0.37%	0.56%
25	207.18161	209.32009	294.51506	0.15%	0.88%	0.36%
26	207.25943	209.43747	294.65323	0.12%	0.93%	0.41%
27	206.57274	208.56500	293.55009	0.45%	0.51%	0.03%
28	206.24777	208.47487	293.25742	0.60%	0.47%	0.07%
29	207.34696	208.57778	294.10449	0.07%	0.52%	0.22%
30	207.18161	209.32009	294.51506	0.15%	0.88%	0.36%
31	207.84532	209.85303	295.36075	0.17%	1.13%	0.65%
32	207.84532	209.85303	295.36075	0.17%	1.13%	0.65%
33	207.25943	209.43747	294.65323	0.12%	0.93%	0.41%
34	206.57274	208.56500	293.55009	0.45%	0.51%	0.03%
35	205.96657	208.11399	292.80311	0.74%	0.30%	0.22%
36	205.96657	208.11399	292.80311	0.74%	0.30%	0.22%
37	206.24777	208.47487	293.25742	0.60%	0.47%	0.07%
38	206.49544	209.02464	293.82251	0.48%	0.73%	0.13%
39	207.34834	208.89440	294.33009	0.07%	0.67%	0.30%
40	207.05888	209.75639	294.73907	0.21%	1.09%	0.44%
41	207.34834	208.89440	294.33009	0.07%	0.67%	0.30%
42	206.49544	209.02464	293.82251	0.48%	0.73%	0.13%
43	205.94479	206.73725	291.81081	0.75%	0.37%	0.56%
44	205.07902	207.02203	291.40269	1.17%	0.23%	0.70%
45	205.94479	206.73725	291.81081	0.75%	0.37%	0.56%
46	207.25943	209.43747	294.65323	0.12%	0.93%	0.41%
47	207.18161	209.32009	294.51506	0.15%	0.88%	0.36%
48	206.24777	208.47487	293.25742	0.60%	0.47%	0.07%
49	206.57274	208.56500	293.55009	0.45%	0.51%	0.03%
50	207.34696	208.57778	294.10449	0.07%	0.52%	0.22%
			Rata-rata:	0.42%	0.64%	0.35%

P Iterasi 13				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.27226	208.69262	294.13330	0.11%	0.57%	0.23%
2	206.95518	209.98826	294.83133	0.26%	1.20%	0.47%
3	208.76876	209.37002	295.66907	0.61%	0.90%	0.76%
4	206.95518	209.98826	294.83133	0.26%	1.20%	0.47%
5	207.27226	208.69262	294.13330	0.11%	0.57%	0.23%
6	204.97051	207.25634	291.49288	1.22%	0.12%	0.67%
7	206.04583	207.56625	292.46988	0.70%	0.03%	0.33%
8	204.97051	207.25634	291.49288	1.22%	0.12%	0.67%
9	207.15405	209.61701	294.70679	0.17%	1.02%	0.43%

10	207.76179	210.04245	295.43661	0.13%	1.23%	0.68%
11	207.76179	210.04245	295.43661	0.13%	1.23%	0.68%
12	207.07972	209.50466	294.57463	0.20%	0.97%	0.38%
13	206.17356	208.64375	293.32533	0.64%	0.55%	0.04%
14	205.85854	208.28893	292.85153	0.79%	0.38%	0.20%
15	205.85854	208.28893	292.85153	0.79%	0.38%	0.20%
16	206.48539	208.72684	293.60366	0.49%	0.59%	0.05%
17	206.37332	209.23096	293.88356	0.54%	0.83%	0.15%
18	207.28504	209.07842	294.41615	0.10%	0.76%	0.33%
19	206.95518	209.98826	294.83133	0.26%	1.20%	0.47%
20	207.28504	209.07842	294.41615	0.10%	0.76%	0.33%
21	206.37332	209.23096	293.88356	0.54%	0.83%	0.15%
22	205.89651	206.89259	291.88682	0.77%	0.29%	0.53%
23	204.97051	207.25634	291.49288	1.22%	0.12%	0.67%
24	205.89651	206.89259	291.88682	0.77%	0.29%	0.53%
25	207.07972	209.50466	294.57463	0.20%	0.97%	0.38%
26	207.15405	209.61701	294.70679	0.17%	1.02%	0.43%
27	206.48539	208.72684	293.60366	0.49%	0.59%	0.05%
28	206.17356	208.64375	293.32533	0.64%	0.55%	0.04%
29	207.27226	208.69262	294.13330	0.11%	0.57%	0.23%
30	207.07972	209.50466	294.57463	0.20%	0.97%	0.38%
31	207.76179	210.04245	295.43661	0.13%	1.23%	0.68%
32	207.76179	210.04245	295.43661	0.13%	1.23%	0.68%
33	207.15405	209.61701	294.70679	0.17%	1.02%	0.43%
34	206.48539	208.72684	293.60366	0.49%	0.59%	0.05%
35	205.85854	208.28893	292.85153	0.79%	0.38%	0.20%
36	205.85854	208.28893	292.85153	0.79%	0.38%	0.20%
37	206.17356	208.64375	293.32533	0.64%	0.55%	0.04%
38	206.37332	209.23096	293.88356	0.54%	0.83%	0.15%
39	207.28504	209.07842	294.41615	0.10%	0.76%	0.33%
40	206.95518	209.98826	294.83133	0.26%	1.20%	0.47%
41	207.28504	209.07842	294.41615	0.10%	0.76%	0.33%
42	206.37332	209.23096	293.88356	0.54%	0.83%	0.15%
43	205.89651	206.89259	291.88682	0.77%	0.29%	0.53%
44	204.97051	207.25634	291.49288	1.22%	0.12%	0.67%
45	205.89651	206.89259	291.88682	0.77%	0.29%	0.53%
46	207.15405	209.61701	294.70679	0.17%	1.02%	0.43%
47	207.07972	209.50466	294.57463	0.20%	0.97%	0.38%
48	206.17356	208.64375	293.32533	0.64%	0.55%	0.04%
49	206.48539	208.72684	293.60366	0.49%	0.59%	0.05%
50	207.27226	208.69262	294.13330	0.11%	0.57%	0.23%
			Rata-rata:	0.46%	0.70%	0.36%

P Iterasi 14				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.33942	208.44593	294.00568	0.08%	0.46%	0.19%
2	207.06927	209.81710	294.78958	0.21%	1.12%	0.46%
3	208.84360	209.10867	295.53694	0.65%	0.78%	0.71%
4	207.06927	209.81710	294.78958	0.21%	1.12%	0.46%
5	207.33942	208.44593	294.00568	0.08%	0.46%	0.19%
6	205.08468	207.11299	291.47130	1.16%	0.19%	0.67%

7	206.10588	207.35912	292.36525	0.67%	0.07%	0.37%
8	205.08468	207.11299	291.47130	1.16%	0.19%	0.67%
9	207.23834	209.42252	294.62777	0.13%	0.93%	0.40%
10	207.86528	209.82771	295.35680	0.18%	1.12%	0.65%
11	207.86528	209.82771	295.35680	0.18%	1.12%	0.65%
12	207.16881	209.31136	294.49985	0.16%	0.87%	0.36%
13	206.27091	208.43491	293.24529	0.59%	0.45%	0.07%
14	205.94825	208.10684	292.78514	0.75%	0.29%	0.23%
15	205.94825	208.10684	292.78514	0.75%	0.29%	0.23%
16	206.57051	208.52064	293.51701	0.45%	0.49%	0.02%
17	206.45981	209.06924	293.82920	0.50%	0.76%	0.13%
18	207.40253	208.85816	294.34256	0.05%	0.65%	0.30%
19	207.06927	209.81710	294.78958	0.21%	1.12%	0.46%
20	207.40253	208.85816	294.34256	0.05%	0.65%	0.30%
21	206.45981	209.06924	293.82920	0.50%	0.76%	0.13%
22	206.00706	206.66354	291.80255	0.72%	0.40%	0.56%
23	205.08468	207.11299	291.47130	1.16%	0.19%	0.67%
24	206.00706	206.66354	291.80255	0.72%	0.40%	0.56%
25	207.16881	209.31136	294.49985	0.16%	0.87%	0.36%
26	207.23834	209.42252	294.62777	0.13%	0.93%	0.40%
27	206.57051	208.52064	293.51701	0.45%	0.49%	0.02%
28	206.27091	208.43491	293.24529	0.59%	0.45%	0.07%
29	207.33942	208.44593	294.00568	0.08%	0.46%	0.19%
30	207.16881	209.31136	294.49985	0.16%	0.87%	0.36%
31	207.86528	209.82771	295.35680	0.18%	1.12%	0.65%
32	207.86528	209.82771	295.35680	0.18%	1.12%	0.65%
33	207.23834	209.42252	294.62777	0.13%	0.93%	0.40%
34	206.57051	208.52064	293.51701	0.45%	0.49%	0.02%
35	205.94825	208.10684	292.78514	0.75%	0.29%	0.23%
36	205.94825	208.10684	292.78514	0.75%	0.29%	0.23%
37	206.27091	208.43491	293.24529	0.59%	0.45%	0.07%
38	206.45981	209.06924	293.82920	0.50%	0.76%	0.13%
39	207.40253	208.85816	294.34256	0.05%	0.65%	0.30%
40	207.06927	209.81710	294.78958	0.21%	1.12%	0.46%
41	207.40253	208.85816	294.34256	0.05%	0.65%	0.30%
42	206.45981	209.06924	293.82920	0.50%	0.76%	0.13%
43	206.00706	206.66354	291.80255	0.72%	0.40%	0.56%
44	205.08468	207.11299	291.47130	1.16%	0.19%	0.67%
45	206.00706	206.66354	291.80255	0.72%	0.40%	0.56%
46	207.23834	209.42252	294.62777	0.13%	0.93%	0.40%
47	207.16881	209.31136	294.49985	0.16%	0.87%	0.36%
48	206.27091	208.43491	293.24529	0.59%	0.45%	0.07%
49	206.57051	208.52064	293.51701	0.45%	0.49%	0.02%
50	207.33942	208.44593	294.00568	0.08%	0.46%	0.19%
			Rata-rata:	0.42%	0.64%	0.35%

P Iterasi 15				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.27964	208.57070	294.05201	0.11%	0.52%	0.21%
2	207.00247	210.03579	294.89838	0.24%	1.22%	0.49%
3	208.77874	209.22341	295.57232	0.62%	0.83%	0.72%

4	207.00247	210.03579	294.89838	0.24%	1.22%	0.49%
5	207.27964	208.57070	294.05201	0.11%	0.52%	0.21%
6	205.02931	207.34457	291.59696	1.19%	0.07%	0.63%
7	206.04089	207.49784	292.41786	0.70%	0.00%	0.35%
8	205.02931	207.34457	291.59696	1.19%	0.07%	0.63%
9	207.16286	209.60609	294.70521	0.16%	1.01%	0.43%
10	207.80635	209.99999	295.43777	0.15%	1.20%	0.68%
11	207.80635	209.99999	295.43777	0.15%	1.20%	0.68%
12	207.09734	209.49813	294.58237	0.19%	0.96%	0.39%
13	206.22461	208.60507	293.33371	0.61%	0.53%	0.04%
14	205.89416	208.28627	292.87468	0.77%	0.38%	0.20%
15	205.89416	208.28627	292.87468	0.77%	0.38%	0.20%
16	206.51138	208.68792	293.59428	0.48%	0.57%	0.05%
17	206.37431	209.28324	293.92147	0.54%	0.86%	0.16%
18	207.37102	209.03333	294.44469	0.06%	0.74%	0.34%
19	207.00247	210.03579	294.89838	0.24%	1.22%	0.49%
20	207.37102	209.03333	294.44469	0.06%	0.74%	0.34%
21	206.37431	209.28324	293.92147	0.54%	0.86%	0.16%
22	205.99229	206.81582	291.89999	0.73%	0.33%	0.53%
23	205.02931	207.34457	291.59696	1.19%	0.07%	0.63%
24	205.99229	206.81582	291.89999	0.73%	0.33%	0.53%
25	207.09734	209.49813	294.58237	0.19%	0.96%	0.39%
26	207.16286	209.60609	294.70521	0.16%	1.01%	0.43%
27	206.51138	208.68792	293.59428	0.48%	0.57%	0.05%
28	206.22461	208.60507	293.33371	0.61%	0.53%	0.04%
29	207.27964	208.57070	294.05201	0.11%	0.52%	0.21%
30	207.09734	209.49813	294.58237	0.19%	0.96%	0.39%
31	207.80635	209.99999	295.43777	0.15%	1.20%	0.68%
32	207.80635	209.99999	295.43777	0.15%	1.20%	0.68%
33	207.16286	209.60609	294.70521	0.16%	1.01%	0.43%
34	206.51138	208.68792	293.59428	0.48%	0.57%	0.05%
35	205.89416	208.28627	292.87468	0.77%	0.38%	0.20%
36	205.89416	208.28627	292.87468	0.77%	0.38%	0.20%
37	206.22461	208.60507	293.33371	0.61%	0.53%	0.04%
38	206.37431	209.28324	293.92147	0.54%	0.86%	0.16%
39	207.37102	209.03333	294.44469	0.06%	0.74%	0.34%
40	207.00247	210.03579	294.89838	0.24%	1.22%	0.49%
41	207.37102	209.03333	294.44469	0.06%	0.74%	0.34%
42	206.37431	209.28324	293.92147	0.54%	0.86%	0.16%
43	205.99229	206.81582	291.89999	0.73%	0.33%	0.53%
44	205.02931	207.34457	291.59696	1.19%	0.07%	0.63%
45	205.99229	206.81582	291.89999	0.73%	0.33%	0.53%
46	207.16286	209.60609	294.70521	0.16%	1.01%	0.43%
47	207.09734	209.49813	294.58237	0.19%	0.96%	0.39%
48	206.22461	208.60507	293.33371	0.61%	0.53%	0.04%
49	206.51138	208.68792	293.59428	0.48%	0.57%	0.05%
50	207.27964	208.57070	294.05201	0.11%	0.52%	0.21%
			Rata-rata:	0.45%	0.69%	0.35%

P Iterasi 16				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda

1	207.30887	208.34092	293.90969	0.09%	0.41%	0.16%
2	207.08211	209.86915	294.83565	0.20%	1.14%	0.47%
3	208.79989	208.98485	295.41845	0.63%	0.72%	0.67%
4	207.08211	209.86915	294.83565	0.20%	1.14%	0.47%
5	207.30887	208.34092	293.90969	0.09%	0.41%	0.16%
6	205.10936	207.18270	291.53820	1.15%	0.15%	0.65%
7	206.06564	207.27453	292.27689	0.69%	0.11%	0.40%
8	205.10936	207.18270	291.53820	1.15%	0.15%	0.65%
9	207.21727	209.42268	294.61306	0.14%	0.93%	0.40%
10	207.86504	209.79671	295.33462	0.18%	1.11%	0.64%
11	207.86504	209.79671	295.33462	0.18%	1.11%	0.64%
12	207.15597	209.31467	294.49317	0.17%	0.87%	0.36%
13	206.28303	208.39774	293.22740	0.59%	0.43%	0.08%
14	205.94816	208.08446	292.76917	0.75%	0.28%	0.23%
15	205.94816	208.08446	292.76917	0.75%	0.28%	0.23%
16	206.55972	208.48555	293.48448	0.45%	0.47%	0.01%
17	206.43489	209.12762	293.85323	0.51%	0.78%	0.14%
18	207.45432	208.81870	294.35106	0.02%	0.64%	0.31%
19	207.08211	209.86915	294.83565	0.20%	1.14%	0.47%
20	207.45432	208.81870	294.35106	0.02%	0.64%	0.31%
21	206.43489	209.12762	293.85323	0.51%	0.78%	0.14%
22	206.06045	206.57816	291.77979	0.69%	0.44%	0.57%
23	205.10936	207.18270	291.53820	1.15%	0.15%	0.65%
24	206.06045	206.57816	291.77979	0.69%	0.44%	0.57%
25	207.15597	209.31467	294.49317	0.17%	0.87%	0.36%
26	207.21727	209.42268	294.61306	0.14%	0.93%	0.40%
27	206.55972	208.48555	293.48448	0.45%	0.47%	0.01%
28	206.28303	208.39774	293.22740	0.59%	0.43%	0.08%
29	207.30887	208.34092	293.90969	0.09%	0.41%	0.16%
30	207.15597	209.31467	294.49317	0.17%	0.87%	0.36%
31	207.86504	209.79671	295.33462	0.18%	1.11%	0.64%
32	207.86504	209.79671	295.33462	0.18%	1.11%	0.64%
33	207.21727	209.42268	294.61306	0.14%	0.93%	0.40%
34	206.55972	208.48555	293.48448	0.45%	0.47%	0.01%
35	205.94816	208.08446	292.76917	0.75%	0.28%	0.23%
36	205.94816	208.08446	292.76917	0.75%	0.28%	0.23%
37	206.28303	208.39774	293.22740	0.59%	0.43%	0.08%
38	206.43489	209.12762	293.85323	0.51%	0.78%	0.14%
39	207.45432	208.81870	294.35106	0.02%	0.64%	0.31%
40	207.08211	209.86915	294.83565	0.20%	1.14%	0.47%
41	207.45432	208.81870	294.35106	0.02%	0.64%	0.31%
42	206.43489	209.12762	293.85323	0.51%	0.78%	0.14%
43	206.06045	206.57816	291.77979	0.69%	0.44%	0.57%
44	205.10936	207.18270	291.53820	1.15%	0.15%	0.65%
45	206.06045	206.57816	291.77979	0.69%	0.44%	0.57%
46	207.21727	209.42268	294.61306	0.14%	0.93%	0.40%
47	207.15597	209.31467	294.49317	0.17%	0.87%	0.36%
48	206.28303	208.39774	293.22740	0.59%	0.43%	0.08%
49	206.55972	208.48555	293.48448	0.45%	0.47%	0.01%
50	207.30887	208.34092	293.90969	0.09%	0.41%	0.16%
			Rata-rata:	0.42%	0.63%	0.34%

	P Iterasi 17			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.27141	208.47168	293.97598	0.11%	0.47%	0.18%
2	207.05785	210.07491	294.96512	0.21%	1.24%	0.52%
3	208.75192	209.09780	295.46447	0.60%	0.77%	0.69%
4	207.05785	210.07491	294.96512	0.21%	1.24%	0.52%
5	207.27141	208.47168	293.97598	0.11%	0.47%	0.18%
6	205.08305	207.40182	291.67545	1.16%	0.05%	0.60%
7	206.01619	207.41263	292.33999	0.72%	0.04%	0.38%
8	205.08305	207.40182	291.67545	1.16%	0.05%	0.60%
9	207.18073	209.60481	294.71686	0.15%	1.01%	0.43%
10	207.83644	209.95872	295.42960	0.16%	1.18%	0.67%
11	207.83644	209.95872	295.42960	0.16%	1.18%	0.67%
12	207.12343	209.49844	294.60093	0.18%	0.96%	0.39%
13	206.25990	208.56411	293.32939	0.60%	0.51%	0.04%
14	205.91542	208.25572	292.86790	0.76%	0.36%	0.20%
15	205.91542	208.25572	292.86790	0.76%	0.36%	0.20%
16	206.52505	208.65246	293.57869	0.47%	0.56%	0.04%
17	206.39093	209.34128	293.97447	0.53%	0.89%	0.18%
18	207.46152	208.98228	294.47220	0.02%	0.71%	0.35%
19	207.05785	210.07491	294.96512	0.21%	1.24%	0.52%
20	207.46152	208.98228	294.47220	0.02%	0.71%	0.35%
21	206.39093	209.34128	293.97447	0.53%	0.89%	0.18%
22	206.06274	206.72087	291.88246	0.69%	0.38%	0.53%
23	205.08305	207.40182	291.67545	1.16%	0.05%	0.60%
24	206.06274	206.72087	291.88246	0.69%	0.38%	0.53%
25	207.12343	209.49844	294.60093	0.18%	0.96%	0.39%
26	207.18073	209.60481	294.71686	0.15%	1.01%	0.43%
27	206.52505	208.65246	293.57869	0.47%	0.56%	0.04%
28	206.25990	208.56411	293.32939	0.60%	0.51%	0.04%
29	207.27141	208.47168	293.97598	0.11%	0.47%	0.18%
30	207.12343	209.49844	294.60093	0.18%	0.96%	0.39%
31	207.83644	209.95872	295.42960	0.16%	1.18%	0.67%
32	207.83644	209.95872	295.42960	0.16%	1.18%	0.67%
33	207.18073	209.60481	294.71686	0.15%	1.01%	0.43%
34	206.52505	208.65246	293.57869	0.47%	0.56%	0.04%
35	205.91542	208.25572	292.86790	0.76%	0.36%	0.20%
36	205.91542	208.25572	292.86790	0.76%	0.36%	0.20%
37	206.25990	208.56411	293.32939	0.60%	0.51%	0.04%
38	206.39093	209.34128	293.97447	0.53%	0.89%	0.18%
39	207.46152	208.98228	294.47220	0.02%	0.71%	0.35%
40	207.05785	210.07491	294.96512	0.21%	1.24%	0.52%
41	207.46152	208.98228	294.47220	0.02%	0.71%	0.35%
42	206.39093	209.34128	293.97447	0.53%	0.89%	0.18%
43	206.06274	206.72087	291.88246	0.69%	0.38%	0.53%
44	205.08305	207.40182	291.67545	1.16%	0.05%	0.60%
45	206.06274	206.72087	291.88246	0.69%	0.38%	0.53%
46	207.18073	209.60481	294.71686	0.15%	1.01%	0.43%
47	207.12343	209.49844	294.60093	0.18%	0.96%	0.39%

48	206.25990	208.56411	293.32939	0.60%	0.51%	0.04%
49	206.52505	208.65246	293.57869	0.47%	0.56%	0.04%
50	207.27141	208.47168	293.97598	0.11%	0.47%	0.18%
				0.43%	0.68%	0.35%

P Iterasi 18				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.26975	208.25710	293.82268	0.11%	0.36%	0.13%
2	207.10010	209.90505	294.87384	0.19%	1.16%	0.49%
3	208.72207	208.87851	295.28823	0.59%	0.66%	0.63%
4	207.10010	209.90505	294.87384	0.19%	1.16%	0.49%
5	207.26975	208.25710	293.82268	0.11%	0.36%	0.13%
6	205.13519	207.24722	291.60222	1.14%	0.12%	0.63%
7	206.01228	207.21142	292.19452	0.72%	0.14%	0.43%
8	205.13519	207.24722	291.60222	1.14%	0.12%	0.63%
9	207.20615	209.42409	294.60624	0.14%	0.93%	0.39%
10	207.84939	209.76147	295.29857	0.17%	1.09%	0.63%
11	207.84939	209.76147	295.29857	0.17%	1.09%	0.63%
12	207.15233	209.31675	294.49209	0.17%	0.88%	0.36%
13	206.28716	208.36796	293.20914	0.58%	0.42%	0.08%
14	205.93997	208.06809	292.75178	0.75%	0.27%	0.24%
15	205.93997	208.06809	292.75178	0.75%	0.27%	0.24%
16	206.54456	208.46272	293.45760	0.46%	0.46%	0.00%
17	206.42915	209.18856	293.89258	0.52%	0.81%	0.15%
18	207.50810	208.76442	294.35047	0.00%	0.61%	0.31%
19	207.10010	209.90505	294.87384	0.19%	1.16%	0.49%
20	207.50810	208.76442	294.35047	0.00%	0.61%	0.31%
21	206.42915	209.18856	293.89258	0.52%	0.81%	0.15%
22	206.09635	206.49513	291.74637	0.68%	0.48%	0.58%
23	205.13519	207.24722	291.60222	1.14%	0.12%	0.63%
24	206.09635	206.49513	291.74637	0.68%	0.48%	0.58%
25	207.15233	209.31675	294.49209	0.17%	0.88%	0.36%
26	207.20615	209.42409	294.60624	0.14%	0.93%	0.39%
27	206.54456	208.46272	293.45760	0.46%	0.46%	0.00%
28	206.28716	208.36796	293.20914	0.58%	0.42%	0.08%
29	207.26975	208.25710	293.82268	0.11%	0.36%	0.13%
30	207.15233	209.31675	294.49209	0.17%	0.88%	0.36%
31	207.84939	209.76147	295.29857	0.17%	1.09%	0.63%
32	207.84939	209.76147	295.29857	0.17%	1.09%	0.63%
33	207.20615	209.42409	294.60624	0.14%	0.93%	0.39%
34	206.54456	208.46272	293.45760	0.46%	0.46%	0.00%
35	205.93997	208.06809	292.75178	0.75%	0.27%	0.24%
36	205.93997	208.06809	292.75178	0.75%	0.27%	0.24%
37	206.28716	208.36796	293.20914	0.58%	0.42%	0.08%
38	206.42915	209.18856	293.89258	0.52%	0.81%	0.15%
39	207.50810	208.76442	294.35047	0.00%	0.61%	0.31%
40	207.10010	209.90505	294.87384	0.19%	1.16%	0.49%
41	207.50810	208.76442	294.35047	0.00%	0.61%	0.31%
42	206.42915	209.18856	293.89258	0.52%	0.81%	0.15%
43	206.09635	206.49513	291.74637	0.68%	0.48%	0.58%
44	205.13519	207.24722	291.60222	1.14%	0.12%	0.63%

45	206.09635	206.49513	291.74637	0.68%	0.48%	0.58%
46	207.20615	209.42409	294.60624	0.14%	0.93%	0.39%
47	207.15233	209.31675	294.49209	0.17%	0.88%	0.36%
48	206.28716	208.36796	293.20914	0.58%	0.42%	0.08%
49	206.54456	208.46272	293.45760	0.46%	0.46%	0.00%
50	207.26975	208.25710	293.82268	0.11%	0.36%	0.13%
			Rata-rata:	0.42%	0.62%	0.34%

P Iterasi 19				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.25408	208.38585	293.90290	0.12%	0.43%	0.15%
2	207.10322	210.10006	295.01488	0.19%	1.25%	0.53%
3	208.68079	209.00512	295.34863	0.57%	0.73%	0.65%
4	207.10322	210.10006	295.01488	0.19%	1.25%	0.53%
5	207.25408	208.38585	293.90290	0.12%	0.43%	0.15%
6	205.14112	207.44901	291.74985	1.14%	0.02%	0.58%
7	205.98725	207.34577	292.27216	0.73%	0.07%	0.40%
8	205.14112	207.44901	291.74985	1.14%	0.02%	0.58%
9	207.19985	209.59749	294.72510	0.14%	1.01%	0.43%
10	207.83727	209.92284	295.40469	0.16%	1.17%	0.67%
11	207.83727	209.92284	295.40469	0.16%	1.17%	0.67%
12	207.14968	209.49051	294.61376	0.17%	0.96%	0.40%
13	206.28876	208.52358	293.32088	0.58%	0.49%	0.04%
14	205.93461	208.22760	292.86140	0.75%	0.35%	0.20%
15	205.93461	208.22760	292.86140	0.75%	0.35%	0.20%
16	206.53647	208.62147	293.56469	0.46%	0.54%	0.04%
17	206.42248	209.39087	294.03193	0.52%	0.91%	0.20%
18	207.54009	208.91443	294.47942	0.02%	0.68%	0.35%
19	207.10322	210.10006	295.01488	0.19%	1.25%	0.53%
20	207.54009	208.91443	294.47942	0.02%	0.68%	0.35%
21	206.42248	209.39087	294.03193	0.52%	0.91%	0.20%
22	206.11924	206.62358	291.85346	0.67%	0.42%	0.54%
23	205.14112	207.44901	291.74985	1.14%	0.02%	0.58%
24	206.11924	206.62358	291.85346	0.67%	0.42%	0.54%
25	207.14968	209.49051	294.61376	0.17%	0.96%	0.40%
26	207.19985	209.59749	294.72510	0.14%	1.01%	0.43%
27	206.53647	208.62147	293.56469	0.46%	0.54%	0.04%
28	206.28876	208.52358	293.32088	0.58%	0.49%	0.04%
29	207.25408	208.38585	293.90290	0.12%	0.43%	0.15%
30	207.14968	209.49051	294.61376	0.17%	0.96%	0.40%
31	207.83727	209.92284	295.40469	0.16%	1.17%	0.67%
32	207.83727	209.92284	295.40469	0.16%	1.17%	0.67%
33	207.19985	209.59749	294.72510	0.14%	1.01%	0.43%
34	206.53647	208.62147	293.56469	0.46%	0.54%	0.04%
35	205.93461	208.22760	292.86140	0.75%	0.35%	0.20%
36	205.93461	208.22760	292.86140	0.75%	0.35%	0.20%
37	206.28876	208.52358	293.32088	0.58%	0.49%	0.04%
38	206.42248	209.39087	294.03193	0.52%	0.91%	0.20%
39	207.54009	208.91443	294.47942	0.02%	0.68%	0.35%
40	207.10322	210.10006	295.01488	0.19%	1.25%	0.53%
41	207.54009	208.91443	294.47942	0.02%	0.68%	0.35%

42	206.42248	209.39087	294.03193	0.52%	0.91%	0.20%
43	206.11924	206.62358	291.85346	0.67%	0.42%	0.54%
44	205.14112	207.44901	291.74985	1.14%	0.02%	0.58%
45	206.11924	206.62358	291.85346	0.67%	0.42%	0.54%
46	207.19985	209.59749	294.72510	0.14%	1.01%	0.43%
47	207.14968	209.49051	294.61376	0.17%	0.96%	0.40%
48	206.28876	208.52358	293.32088	0.58%	0.49%	0.04%
49	206.53647	208.62147	293.56469	0.46%	0.54%	0.04%
50	207.25408	208.38585	293.90290	0.12%	0.43%	0.15%
			Rata-rata:	0.42%	0.68%	0.35%

	P Iterasi 20			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.2238	208.1879	293.74126	0.13%	0.33%	0.10%
2	207.1219	209.9377	294.91239	0.18%	1.17%	0.50%
3	208.6311	208.8189	295.18180	0.55%	0.64%	0.59%
4	207.1219	209.9377	294.91239	0.18%	1.17%	0.50%
5	207.2238	208.1879	293.74126	0.13%	0.33%	0.10%
6	205.1625	207.3012	291.65978	1.13%	0.10%	0.61%
7	205.9533	207.1643	292.11951	0.75%	0.16%	0.45%
8	205.1625	207.3012	291.65978	1.13%	0.10%	0.61%
9	207.2004	209.4242	294.60225	0.14%	0.93%	0.39%
10	207.8274	209.7447	295.27118	0.16%	1.08%	0.62%
11	207.8274	209.7447	295.27118	0.16%	1.08%	0.62%
12	207.1529	209.3156	294.49168	0.17%	0.88%	0.36%
13	206.2841	208.3391	293.18648	0.59%	0.40%	0.09%
14	205.9273	208.053	292.73209	0.76%	0.27%	0.24%
15	205.9273	208.053	292.73209	0.76%	0.27%	0.24%
16	206.5264	208.4442	293.43163	0.47%	0.46%	0.01%
17	206.4373	209.242	293.93629	0.51%	0.84%	0.17%
18	207.5589	208.7024	294.34234	0.03%	0.58%	0.30%
19	207.1219	209.9377	294.91239	0.18%	1.17%	0.50%
20	207.5589	208.7024	294.34234	0.03%	0.58%	0.30%
21	206.4373	209.242	293.93629	0.51%	0.84%	0.17%
22	206.1165	206.4102	291.70049	0.67%	0.53%	0.60%
23	205.1625	207.3012	291.65978	1.13%	0.10%	0.61%
24	206.1165	206.4102	291.70049	0.67%	0.53%	0.60%
25	207.1529	209.3156	294.49168	0.17%	0.88%	0.36%
26	207.2004	209.4242	294.60225	0.14%	0.93%	0.39%
27	206.5264	208.4442	293.43163	0.47%	0.46%	0.01%
28	206.2841	208.3391	293.18648	0.59%	0.40%	0.09%
29	207.2238	208.1879	293.74126	0.13%	0.33%	0.10%
30	207.1529	209.3156	294.49168	0.17%	0.88%	0.36%
31	207.8274	209.7447	295.27118	0.16%	1.08%	0.62%
32	207.8274	209.7447	295.27118	0.16%	1.08%	0.62%
33	207.2004	209.4242	294.60225	0.14%	0.93%	0.39%
34	206.5264	208.4442	293.43163	0.47%	0.46%	0.01%
35	205.9273	208.053	292.73209	0.76%	0.27%	0.24%
36	205.9273	208.053	292.73209	0.76%	0.27%	0.24%
37	206.2841	208.3391	293.18648	0.59%	0.40%	0.09%
38	206.4373	209.242	293.93629	0.51%	0.84%	0.17%

39	207.5589	208.7024	294.34234	0.03%	0.58%	0.30%
40	207.1219	209.9377	294.91239	0.18%	1.17%	0.50%
41	207.5589	208.7024	294.34234	0.03%	0.58%	0.30%
42	206.4373	209.242	293.93629	0.51%	0.84%	0.17%
43	206.1165	206.4102	291.70049	0.67%	0.53%	0.60%
44	205.1625	207.3012	291.65978	1.13%	0.10%	0.61%
45	206.1165	206.4102	291.70049	0.67%	0.53%	0.60%
46	207.2004	209.4242	294.60225	0.14%	0.93%	0.39%
47	207.1529	209.3156	294.49168	0.17%	0.88%	0.36%
48	206.2841	208.3391	293.18648	0.59%	0.40%	0.09%
49	206.5264	208.4442	293.43163	0.47%	0.46%	0.01%
50	207.2238	208.1879	293.74126	0.13%	0.33%	0.10%
			Rata-rata:	0.42%	0.62%	0.34%

P Iterasi 21				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.22569	208.31081	293.82968	0.13%	0.39%	0.13%
2	207.15049	210.11372	295.05779	0.17%	1.26%	0.55%
3	208.60938	208.95040	295.25945	0.53%	0.70%	0.62%
4	207.15049	210.11372	295.05779	0.17%	1.26%	0.55%
5	207.22569	208.31081	293.82968	0.13%	0.39%	0.13%
6	205.19523	207.48874	291.81614	1.11%	0.01%	0.56%
7	205.95216	207.29960	292.21468	0.75%	0.10%	0.42%
8	205.19523	207.48874	291.81614	1.11%	0.01%	0.56%
9	207.21802	209.58164	294.72660	0.14%	1.00%	0.44%
10	207.83710	209.89699	295.38620	0.16%	1.16%	0.66%
11	207.83710	209.89699	295.38620	0.16%	1.16%	0.66%
12	207.17356	209.47249	294.61773	0.16%	0.95%	0.40%
13	206.30497	208.48389	293.30407	0.58%	0.47%	0.05%
14	205.94619	208.20524	292.85364	0.75%	0.34%	0.20%
15	205.94619	208.20524	292.85364	0.75%	0.34%	0.20%
16	206.53973	208.59384	293.54736	0.46%	0.53%	0.03%
17	206.45957	209.42723	294.08386	0.50%	0.93%	0.22%
18	207.61087	208.83129	294.47033	0.05%	0.64%	0.35%
19	207.15049	210.11372	295.05779	0.17%	1.26%	0.55%
20	207.61087	208.83129	294.47033	0.05%	0.64%	0.35%
21	206.45957	209.42723	294.08386	0.50%	0.93%	0.22%
22	206.15519	206.52751	291.81086	0.65%	0.47%	0.56%
23	205.19523	207.48874	291.81614	1.11%	0.01%	0.56%
24	206.15519	206.52751	291.81086	0.65%	0.47%	0.56%
25	207.17356	209.47249	294.61773	0.16%	0.95%	0.40%
26	207.21802	209.58164	294.72660	0.14%	1.00%	0.44%
27	206.53973	208.59384	293.54736	0.46%	0.53%	0.03%
28	206.30497	208.48389	293.30407	0.58%	0.47%	0.05%
29	207.22569	208.31081	293.82968	0.13%	0.39%	0.13%
30	207.17356	209.47249	294.61773	0.16%	0.95%	0.40%
31	207.83710	209.89699	295.38620	0.16%	1.16%	0.66%
32	207.83710	209.89699	295.38620	0.16%	1.16%	0.66%
33	207.21802	209.58164	294.72660	0.14%	1.00%	0.44%
34	206.53973	208.59384	293.54736	0.46%	0.53%	0.03%
35	205.94619	208.20524	292.85364	0.75%	0.34%	0.20%

36	205.94619	208.20524	292.85364	0.75%	0.34%	0.20%
37	206.30497	208.48389	293.30407	0.58%	0.47%	0.05%
38	206.45957	209.42723	294.08386	0.50%	0.93%	0.22%
39	207.61087	208.83129	294.47033	0.05%	0.64%	0.35%
40	207.15049	210.11372	295.05779	0.17%	1.26%	0.55%
41	207.61087	208.83129	294.47033	0.05%	0.64%	0.35%
42	206.45957	209.42723	294.08386	0.50%	0.93%	0.22%
43	206.15519	206.52751	291.81086	0.65%	0.47%	0.56%
44	205.19523	207.48874	291.81614	1.11%	0.01%	0.56%
45	206.15519	206.52751	291.81086	0.65%	0.47%	0.56%
46	207.21802	209.58164	294.72660	0.14%	1.00%	0.44%
47	207.17356	209.47249	294.61773	0.16%	0.95%	0.40%
48	206.30497	208.48389	293.30407	0.58%	0.47%	0.05%
49	206.53973	208.59384	293.54736	0.46%	0.53%	0.03%
50	207.22569	208.31081	293.82968	0.13%	0.39%	0.13%
			Rata-rata:	0.41%	0.67%	0.35%

P Iterasi 22				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.17108	208.13424	293.66600	0.16%	0.31%	0.07%
2	207.14379	209.96305	294.94581	0.17%	1.19%	0.51%
3	208.54360	208.79408	295.10236	0.50%	0.62%	0.56%
4	207.14379	209.96305	294.94581	0.17%	1.19%	0.51%
5	207.17108	208.13424	293.66600	0.16%	0.31%	0.07%
6	205.19667	207.34860	291.71753	1.11%	0.07%	0.59%
7	205.90361	207.13371	292.06279	0.77%	0.18%	0.47%
8	205.19667	207.34860	291.71753	1.11%	0.07%	0.59%
9	207.19286	209.42161	294.59513	0.15%	0.93%	0.39%
10	207.80502	209.73862	295.25110	0.15%	1.08%	0.61%
11	207.80502	209.73862	295.25110	0.15%	1.08%	0.61%
12	207.15023	209.31055	294.48621	0.17%	0.87%	0.35%
13	206.27568	208.31513	293.16352	0.59%	0.39%	0.10%
14	205.92049	208.04193	292.71948	0.76%	0.26%	0.25%
15	205.92049	208.04193	292.71948	0.76%	0.26%	0.25%
16	206.50724	208.43243	293.40982	0.48%	0.45%	0.01%
17	206.45214	209.28748	293.97914	0.50%	0.86%	0.18%
18	207.59957	208.63095	294.32032	0.05%	0.55%	0.30%
19	207.14379	209.96305	294.94581	0.17%	1.19%	0.51%
20	207.59957	208.63095	294.32032	0.05%	0.55%	0.30%
21	206.45214	209.28748	293.97914	0.50%	0.86%	0.18%
22	206.12649	206.32896	291.65009	0.66%	0.56%	0.61%
23	205.19667	207.34860	291.71753	1.11%	0.07%	0.59%
24	206.12649	206.32896	291.65009	0.66%	0.56%	0.61%
25	207.15023	209.31055	294.48621	0.17%	0.87%	0.35%
26	207.19286	209.42161	294.59513	0.15%	0.93%	0.39%
27	206.50724	208.43243	293.40982	0.48%	0.45%	0.01%
28	206.27568	208.31513	293.16352	0.59%	0.39%	0.10%
29	207.17108	208.13424	293.66600	0.16%	0.31%	0.07%
30	207.15023	209.31055	294.48621	0.17%	0.87%	0.35%
31	207.80502	209.73862	295.25110	0.15%	1.08%	0.61%
32	207.80502	209.73862	295.25110	0.15%	1.08%	0.61%

33	207.19286	209.42161	294.59513	0.15%	0.93%	0.39%
34	206.50724	208.43243	293.40982	0.48%	0.45%	0.01%
35	205.92049	208.04193	292.71948	0.76%	0.26%	0.25%
36	205.92049	208.04193	292.71948	0.76%	0.26%	0.25%
37	206.27568	208.31513	293.16352	0.59%	0.39%	0.10%
38	206.45214	209.28748	293.97914	0.50%	0.86%	0.18%
39	207.59957	208.63095	294.32032	0.05%	0.55%	0.30%
40	207.14379	209.96305	294.94581	0.17%	1.19%	0.51%
41	207.59957	208.63095	294.32032	0.05%	0.55%	0.30%
42	206.45214	209.28748	293.97914	0.50%	0.86%	0.18%
43	206.12649	206.32896	291.65009	0.66%	0.56%	0.61%
44	205.19667	207.34860	291.71753	1.11%	0.07%	0.59%
45	206.12649	206.32896	291.65009	0.66%	0.56%	0.61%
46	207.19286	209.42161	294.59513	0.15%	0.93%	0.39%
47	207.15023	209.31055	294.48621	0.17%	0.87%	0.35%
48	206.27568	208.31513	293.16352	0.59%	0.39%	0.10%
49	206.50724	208.43243	293.40982	0.48%	0.45%	0.01%
50	207.17108	208.13424	293.66600	0.16%	0.31%	0.07%
			Rata-rata:	0.42%	0.62%	0.34%

	P Iterasi 23			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.18791	208.25093	293.76058	0.15%	0.36%	0.11%
2	207.19473	210.12090	295.09396	0.15%	1.26%	0.56%
3	208.54758	208.92692	295.19917	0.50%	0.69%	0.60%
4	207.19473	210.12090	295.09396	0.15%	1.26%	0.56%
5	207.18791	208.25093	293.76058	0.15%	0.36%	0.11%
6	205.25026	207.51571	291.87401	1.08%	0.01%	0.54%
7	205.92180	207.25834	292.16401	0.76%	0.12%	0.44%
8	205.25026	207.51571	291.87401	1.08%	0.01%	0.54%
9	207.22952	209.56408	294.72221	0.13%	0.99%	0.43%
10	207.83773	209.88089	295.37520	0.16%	1.15%	0.66%
11	207.83773	209.88089	295.37520	0.16%	1.15%	0.66%
12	207.18920	209.45177	294.61400	0.15%	0.94%	0.40%
13	206.31191	208.44712	293.28281	0.57%	0.46%	0.06%
14	205.95813	208.17796	292.84264	0.74%	0.33%	0.21%
15	205.95813	208.17796	292.84264	0.74%	0.33%	0.21%
16	206.53819	208.57033	293.52957	0.46%	0.52%	0.03%
17	206.49726	209.45477	294.12993	0.48%	0.94%	0.23%
18	207.66674	208.74057	294.44541	0.08%	0.60%	0.34%
19	207.19473	210.12090	295.09396	0.15%	1.26%	0.56%
20	207.66674	208.74057	294.44541	0.08%	0.60%	0.34%
21	206.49726	209.45477	294.12993	0.48%	0.94%	0.23%
22	206.17651	206.43146	291.75795	0.64%	0.51%	0.58%
23	205.25026	207.51571	291.87401	1.08%	0.01%	0.54%
24	206.17651	206.43146	291.75795	0.64%	0.51%	0.58%
25	207.18920	209.45177	294.61400	0.15%	0.94%	0.40%
26	207.22952	209.56408	294.72221	0.13%	0.99%	0.43%
27	206.53819	208.57033	293.52957	0.46%	0.52%	0.03%
28	206.31191	208.44712	293.28281	0.57%	0.46%	0.06%
29	207.18791	208.25093	293.76058	0.15%	0.36%	0.11%

30	207.18920	209.45177	294.61400	0.15%	0.94%	0.40%
31	207.83773	209.88089	295.37520	0.16%	1.15%	0.66%
32	207.83773	209.88089	295.37520	0.16%	1.15%	0.66%
33	207.22952	209.56408	294.72221	0.13%	0.99%	0.43%
34	206.53819	208.57033	293.52957	0.46%	0.52%	0.03%
35	205.95813	208.17796	292.84264	0.74%	0.33%	0.21%
36	205.95813	208.17796	292.84264	0.74%	0.33%	0.21%
37	206.31191	208.44712	293.28281	0.57%	0.46%	0.06%
38	206.49726	209.45477	294.12993	0.48%	0.94%	0.23%
39	207.66674	208.74057	294.44541	0.08%	0.60%	0.34%
40	207.19473	210.12090	295.09396	0.15%	1.26%	0.56%
41	207.66674	208.74057	294.44541	0.08%	0.60%	0.34%
42	206.49726	209.45477	294.12993	0.48%	0.94%	0.23%
43	206.17651	206.43146	291.75795	0.64%	0.51%	0.58%
44	205.25026	207.51571	291.87401	1.08%	0.01%	0.54%
45	206.17651	206.43146	291.75795	0.64%	0.51%	0.58%
46	207.22952	209.56408	294.72221	0.13%	0.99%	0.43%
47	207.18920	209.45177	294.61400	0.15%	0.94%	0.40%
48	206.31191	208.44712	293.28281	0.57%	0.46%	0.06%
49	206.53819	208.57033	293.52957	0.46%	0.52%	0.03%
50	207.18791	208.25093	293.76058	0.15%	0.36%	0.11%
				0.41%	0.66%	0.35%

	P Iterasi 24			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.11571	208.09808	293.60131	0.19%	0.29%	0.05%
2	207.16763	209.98055	294.97502	0.16%	1.20%	0.52%
3	208.47257	208.79017	295.04940	0.47%	0.62%	0.55%
4	207.16763	209.98055	294.97502	0.16%	1.20%	0.52%
5	207.11571	208.09808	293.60131	0.19%	0.29%	0.05%
6	205.23250	207.38818	291.77086	1.09%	0.05%	0.57%
7	205.85669	207.11196	292.01428	0.79%	0.19%	0.49%
8	205.23250	207.38818	291.77086	1.09%	0.05%	0.57%
9	207.18416	209.41944	294.58747	0.15%	0.93%	0.39%
10	207.78916	209.73661	295.23851	0.14%	1.08%	0.61%
11	207.78916	209.73661	295.23851	0.14%	1.08%	0.61%
12	207.14487	209.30515	294.47860	0.17%	0.87%	0.35%
13	206.26292	208.29804	293.14239	0.60%	0.38%	0.10%
14	205.91316	208.03081	292.70642	0.76%	0.26%	0.25%
15	205.91316	208.03081	292.70642	0.76%	0.26%	0.25%
16	206.48797	208.42825	293.39328	0.49%	0.45%	0.02%
17	206.47195	209.32758	294.02160	0.50%	0.88%	0.20%
18	207.63033	208.55297	294.28676	0.06%	0.51%	0.29%
19	207.16763	209.98055	294.97502	0.16%	1.20%	0.52%
20	207.63033	208.55297	294.28676	0.06%	0.51%	0.29%
21	206.47195	209.32758	294.02160	0.50%	0.88%	0.20%
22	206.12491	206.25277	291.59507	0.66%	0.60%	0.63%
23	205.23250	207.38818	291.77086	1.09%	0.05%	0.57%
24	206.12491	206.25277	291.59507	0.66%	0.60%	0.63%
25	207.14487	209.30515	294.47860	0.17%	0.87%	0.35%
26	207.18416	209.41944	294.58747	0.15%	0.93%	0.39%

27	206.48797	208.42825	293.39328	0.49%	0.45%	0.02%
28	206.26292	208.29804	293.14239	0.60%	0.38%	0.10%
29	207.11571	208.09808	293.60131	0.19%	0.29%	0.05%
30	207.14487	209.30515	294.47860	0.17%	0.87%	0.35%
31	207.78916	209.73661	295.23851	0.14%	1.08%	0.61%
32	207.78916	209.73661	295.23851	0.14%	1.08%	0.61%
33	207.18416	209.41944	294.58747	0.15%	0.93%	0.39%
34	206.48797	208.42825	293.39328	0.49%	0.45%	0.02%
35	205.91316	208.03081	292.70642	0.76%	0.26%	0.25%
36	205.91316	208.03081	292.70642	0.76%	0.26%	0.25%
37	206.26292	208.29804	293.14239	0.60%	0.38%	0.10%
38	206.47195	209.32758	294.02160	0.50%	0.88%	0.20%
39	207.63033	208.55297	294.28676	0.06%	0.51%	0.29%
40	207.16763	209.98055	294.97502	0.16%	1.20%	0.52%
41	207.63033	208.55297	294.28676	0.06%	0.51%	0.29%
42	206.47195	209.32758	294.02160	0.50%	0.88%	0.20%
43	206.12491	206.25277	291.59507	0.66%	0.60%	0.63%
44	205.23250	207.38818	291.77086	1.09%	0.05%	0.57%
45	206.12491	206.25277	291.59507	0.66%	0.60%	0.63%
46	207.18416	209.41944	294.58747	0.15%	0.93%	0.39%
47	207.14487	209.30515	294.47860	0.17%	0.87%	0.35%
48	206.26292	208.29804	293.14239	0.60%	0.38%	0.10%
49	206.48797	208.42825	293.39328	0.49%	0.45%	0.02%
50	207.11571	208.09808	293.60131	0.19%	0.29%	0.05%
			Rata-rata:	0.42%	0.62%	0.34%

	P Iterasi 25			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.14680	208.20732	293.70067	0.17%	0.34%	0.09%
2	207.23297	210.11828	295.11895	0.13%	1.26%	0.57%
3	208.49632	208.91612	295.15532	0.48%	0.68%	0.58%
4	207.23297	210.11828	295.11895	0.13%	1.26%	0.57%
5	207.14680	208.20732	293.70067	0.17%	0.34%	0.09%
6	205.30383	207.53402	291.92470	1.06%	0.02%	0.52%
7	205.89152	207.22370	292.11809	0.78%	0.13%	0.45%
8	205.30383	207.53402	291.92470	1.06%	0.02%	0.52%
9	207.23501	209.54625	294.71339	0.13%	0.99%	0.43%
10	207.83740	209.86405	295.36301	0.16%	1.14%	0.65%
11	207.83740	209.86405	295.36301	0.16%	1.14%	0.65%
12	207.19727	209.43036	294.60445	0.15%	0.93%	0.39%
13	206.31351	208.41661	293.26225	0.57%	0.44%	0.06%
14	205.96646	208.14939	292.82819	0.74%	0.31%	0.21%
15	205.96646	208.14939	292.82819	0.74%	0.31%	0.21%
16	206.53541	208.55306	293.51534	0.46%	0.51%	0.02%
17	206.53585	209.47589	294.17207	0.46%	0.95%	0.25%
18	207.70557	208.64306	294.40368	0.10%	0.55%	0.33%
19	207.23297	210.11828	295.11895	0.13%	1.26%	0.57%
20	207.70557	208.64306	294.40368	0.10%	0.55%	0.33%
21	206.53585	209.47589	294.17207	0.46%	0.95%	0.25%
22	206.18503	206.34036	291.69952	0.63%	0.56%	0.60%
23	205.30383	207.53402	291.92470	1.06%	0.02%	0.52%

24	206.18503	206.34036	291.69952	0.63%	0.56%	0.60%
25	207.19727	209.43036	294.60445	0.15%	0.93%	0.39%
26	207.23501	209.54625	294.71339	0.13%	0.99%	0.43%
27	206.53541	208.55306	293.51534	0.46%	0.51%	0.02%
28	206.31351	208.41661	293.26225	0.57%	0.44%	0.06%
29	207.14680	208.20732	293.70067	0.17%	0.34%	0.09%
30	207.19727	209.43036	294.60445	0.15%	0.93%	0.39%
31	207.83740	209.86405	295.36301	0.16%	1.14%	0.65%
32	207.83740	209.86405	295.36301	0.16%	1.14%	0.65%
33	207.23501	209.54625	294.71339	0.13%	0.99%	0.43%
34	206.53541	208.55306	293.51534	0.46%	0.51%	0.02%
35	205.96646	208.14939	292.82819	0.74%	0.31%	0.21%
36	205.96646	208.14939	292.82819	0.74%	0.31%	0.21%
37	206.31351	208.41661	293.26225	0.57%	0.44%	0.06%
38	206.53585	209.47589	294.17207	0.46%	0.95%	0.25%
39	207.70557	208.64306	294.40368	0.10%	0.55%	0.33%
40	207.23297	210.11828	295.11895	0.13%	1.26%	0.57%
41	207.70557	208.64306	294.40368	0.10%	0.55%	0.33%
42	206.53585	209.47589	294.17207	0.46%	0.95%	0.25%
43	206.18503	206.34036	291.69952	0.63%	0.56%	0.60%
44	205.30383	207.53402	291.92470	1.06%	0.02%	0.52%
45	206.18503	206.34036	291.69952	0.63%	0.56%	0.60%
46	207.23501	209.54625	294.71339	0.13%	0.99%	0.43%
47	207.19727	209.43036	294.60445	0.15%	0.93%	0.39%
48	206.31351	208.41661	293.26225	0.57%	0.44%	0.06%
49	206.53541	208.55306	293.51534	0.46%	0.51%	0.02%
50	207.14680	208.20732	293.70067	0.17%	0.34%	0.09%
			Rata-rata:	0.41%	0.66%	0.35%

	P Iterasi 26			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.06335	208.07754	293.54981	0.21%	0.28%	0.03%
2	207.18938	209.99323	294.99932	0.15%	1.20%	0.53%
3	208.41498	208.80098	295.01637	0.44%	0.63%	0.53%
4	207.18938	209.99323	294.99932	0.15%	1.20%	0.53%
5	207.06335	208.07754	293.54981	0.21%	0.28%	0.03%
6	205.26939	207.41845	291.81833	1.07%	0.04%	0.56%
7	205.81106	207.09582	291.97067	0.81%	0.19%	0.50%
8	205.26939	207.41845	291.81833	1.07%	0.04%	0.56%
9	207.17470	209.41963	294.58095	0.16%	0.93%	0.39%
10	207.77562	209.73802	295.22998	0.13%	1.08%	0.61%
11	207.77562	209.73802	295.22998	0.13%	1.08%	0.61%
12	207.13733	209.30189	294.47097	0.17%	0.87%	0.35%
13	206.24997	208.28615	293.12484	0.60%	0.38%	0.11%
14	205.90395	208.01785	292.69073	0.77%	0.25%	0.26%
15	205.90395	208.01785	292.69073	0.77%	0.25%	0.26%
16	206.47228	208.42885	293.38266	0.50%	0.45%	0.02%
17	206.49715	209.36194	294.06376	0.48%	0.90%	0.21%
18	207.64857	208.47334	294.24320	0.07%	0.47%	0.27%
19	207.18938	209.99323	294.99932	0.15%	1.20%	0.53%
20	207.64857	208.47334	294.24320	0.07%	0.47%	0.27%

21	206.49715	209.36194	294.06376	0.48%	0.90%	0.21%
22	206.11467	206.18074	291.53688	0.67%	0.64%	0.65%
23	205.26939	207.41845	291.81833	1.07%	0.04%	0.56%
24	206.11467	206.18074	291.53688	0.67%	0.64%	0.65%
25	207.13733	209.30189	294.47097	0.17%	0.87%	0.35%
26	207.17470	209.41963	294.58095	0.16%	0.93%	0.39%
27	206.47228	208.42885	293.38266	0.50%	0.45%	0.02%
28	206.24997	208.28615	293.12484	0.60%	0.38%	0.11%
29	207.06335	208.07754	293.54981	0.21%	0.28%	0.03%
30	207.13733	209.30189	294.47097	0.17%	0.87%	0.35%
31	207.77562	209.73802	295.22998	0.13%	1.08%	0.61%
32	207.77562	209.73802	295.22998	0.13%	1.08%	0.61%
33	207.17470	209.41963	294.58095	0.16%	0.93%	0.39%
34	206.47228	208.42885	293.38266	0.50%	0.45%	0.02%
35	205.90395	208.01785	292.69073	0.77%	0.25%	0.26%
36	205.90395	208.01785	292.69073	0.77%	0.25%	0.26%
37	206.24997	208.28615	293.12484	0.60%	0.38%	0.11%
38	206.49715	209.36194	294.06376	0.48%	0.90%	0.21%
39	207.64857	208.47334	294.24320	0.07%	0.47%	0.27%
40	207.18938	209.99323	294.99932	0.15%	1.20%	0.53%
41	207.64857	208.47334	294.24320	0.07%	0.47%	0.27%
42	206.49715	209.36194	294.06376	0.48%	0.90%	0.21%
43	206.11467	206.18074	291.53688	0.67%	0.64%	0.65%
44	205.26939	207.41845	291.81833	1.07%	0.04%	0.56%
45	206.11467	206.18074	291.53688	0.67%	0.64%	0.65%
46	207.17470	209.41963	294.58095	0.16%	0.93%	0.39%
47	207.13733	209.30189	294.47097	0.17%	0.87%	0.35%
48	206.24997	208.28615	293.12484	0.60%	0.38%	0.11%
49	206.47228	208.42885	293.38266	0.50%	0.45%	0.02%
50	207.06335	208.07754	293.54981	0.21%	0.28%	0.03%
			Rata-rata:	0.42%	0.61%	0.34%

P Iterasi 27				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.10746	208.17695	293.65140	0.19%	0.33%	0.07%
2	207.26592	210.11052	295.13657	0.11%	1.26%	0.57%
3	208.45692	208.91559	295.12711	0.46%	0.68%	0.57%
4	207.26592	210.11052	295.13657	0.11%	1.26%	0.57%
5	207.10746	208.17695	293.65140	0.19%	0.33%	0.07%
6	205.35226	207.54377	291.96570	1.04%	0.02%	0.51%
7	205.85605	207.19642	292.07374	0.79%	0.15%	0.47%
8	205.35226	207.54377	291.96570	1.04%	0.02%	0.51%
9	207.23720	209.52987	294.70328	0.13%	0.98%	0.43%
10	207.83683	209.84878	295.35175	0.16%	1.13%	0.65%
11	207.83683	209.84878	295.35175	0.16%	1.13%	0.65%
12	207.20068	209.41043	294.59268	0.14%	0.92%	0.39%
13	206.31179	208.39008	293.24219	0.57%	0.43%	0.07%
14	205.96639	208.12071	292.80776	0.74%	0.30%	0.22%
15	205.96639	208.12071	292.80776	0.74%	0.30%	0.22%
16	206.53282	208.53882	293.50340	0.47%	0.50%	0.02%
17	206.57585	209.48966	294.20996	0.45%	0.96%	0.26%

18	207.72894	208.54450	294.35034	0.11%	0.50%	0.31%
19	207.26592	210.11052	295.13657	0.11%	1.26%	0.57%
20	207.72894	208.54450	294.35034	0.11%	0.50%	0.31%
21	206.57585	209.48966	294.20996	0.45%	0.96%	0.26%
22	206.18063	206.25390	291.63526	0.64%	0.60%	0.62%
23	205.35226	207.54377	291.96570	1.04%	0.02%	0.51%
24	206.18063	206.25390	291.63526	0.64%	0.60%	0.62%
25	207.20068	209.41043	294.59268	0.14%	0.92%	0.39%
26	207.23720	209.52987	294.70328	0.13%	0.98%	0.43%
27	206.53282	208.53882	293.50340	0.47%	0.50%	0.02%
28	206.31179	208.39008	293.24219	0.57%	0.43%	0.07%
29	207.10746	208.17695	293.65140	0.19%	0.33%	0.07%
30	207.20068	209.41043	294.59268	0.14%	0.92%	0.39%
31	207.83683	209.84878	295.35175	0.16%	1.13%	0.65%
32	207.83683	209.84878	295.35175	0.16%	1.13%	0.65%
33	207.23720	209.52987	294.70328	0.13%	0.98%	0.43%
34	206.53282	208.53882	293.50340	0.47%	0.50%	0.02%
35	205.96639	208.12071	292.80776	0.74%	0.30%	0.22%
36	205.96639	208.12071	292.80776	0.74%	0.30%	0.22%
37	206.31179	208.39008	293.24219	0.57%	0.43%	0.07%
38	206.57585	209.48966	294.20996	0.45%	0.96%	0.26%
39	207.72894	208.54450	294.35034	0.11%	0.50%	0.31%
40	207.26592	210.11052	295.13657	0.11%	1.26%	0.57%
41	207.72894	208.54450	294.35034	0.11%	0.50%	0.31%
42	206.57585	209.48966	294.20996	0.45%	0.96%	0.26%
43	206.18063	206.25390	291.63526	0.64%	0.60%	0.62%
44	205.35226	207.54377	291.96570	1.04%	0.02%	0.51%
45	206.18063	206.25390	291.63526	0.64%	0.60%	0.62%
46	207.23720	209.52987	294.70328	0.13%	0.98%	0.43%
47	207.20068	209.41043	294.59268	0.14%	0.92%	0.39%
48	206.31179	208.39008	293.24219	0.57%	0.43%	0.07%
49	206.53282	208.53882	293.50340	0.47%	0.50%	0.02%
50	207.10746	208.17695	293.65140	0.19%	0.33%	0.07%
			Rata-rata:	0.40%	0.65%	0.35%

P Iterasi 28				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	207.01690	208.06860	293.51072	0.23%	0.27%	0.02%
2	207.20835	210.00167	295.01864	0.14%	1.21%	0.53%
3	208.37043	208.81991	294.99829	0.42%	0.64%	0.53%
4	207.20835	210.00167	295.01864	0.14%	1.21%	0.53%
5	207.01690	208.06860	293.51072	0.23%	0.27%	0.02%
6	205.30612	207.44253	291.86128	1.06%	0.03%	0.54%
7	205.76728	207.09044	291.93599	0.84%	0.20%	0.52%
8	205.30612	207.44253	291.86128	1.06%	0.03%	0.54%
9	207.16523	209.42125	294.57545	0.16%	0.93%	0.38%
10	207.76372	209.74082	295.22360	0.13%	1.08%	0.60%
11	207.76372	209.74082	295.22360	0.13%	1.08%	0.60%
12	207.12854	209.30022	294.46361	0.18%	0.87%	0.35%
13	206.23810	208.27808	293.11075	0.61%	0.37%	0.12%
14	205.89258	208.00811	292.67581	0.77%	0.24%	0.26%

15	205.89258	208.00811	292.67581	0.77%	0.24%	0.26%
16	206.46075	208.43210	293.37686	0.50%	0.45%	0.02%
17	206.52646	209.38889	294.10353	0.47%	0.91%	0.22%
18	207.65446	208.39401	294.19116	0.07%	0.43%	0.25%
19	207.20835	210.00167	295.01864	0.14%	1.21%	0.53%
20	207.65446	208.39401	294.19116	0.07%	0.43%	0.25%
21	206.52646	209.38889	294.10353	0.47%	0.91%	0.22%
22	206.09681	206.11486	291.47766	0.68%	0.67%	0.67%
23	205.30612	207.44253	291.86128	1.06%	0.03%	0.54%
24	206.09681	206.11486	291.47766	0.68%	0.67%	0.67%
25	207.12854	209.30022	294.46361	0.18%	0.87%	0.35%
26	207.16523	209.42125	294.57545	0.16%	0.93%	0.38%
27	206.46075	208.43210	293.37686	0.50%	0.45%	0.02%
28	206.23810	208.27808	293.11075	0.61%	0.37%	0.12%
29	207.01690	208.06860	293.51072	0.23%	0.27%	0.02%
30	207.12854	209.30022	294.46361	0.18%	0.87%	0.35%
31	207.76372	209.74082	295.22360	0.13%	1.08%	0.60%
32	207.76372	209.74082	295.22360	0.13%	1.08%	0.60%
33	207.16523	209.42125	294.57545	0.16%	0.93%	0.38%
34	206.46075	208.43210	293.37686	0.50%	0.45%	0.02%
35	205.89258	208.00811	292.67581	0.77%	0.24%	0.26%
36	205.89258	208.00811	292.67581	0.77%	0.24%	0.26%
37	206.23810	208.27808	293.11075	0.61%	0.37%	0.12%
38	206.52646	209.38889	294.10353	0.47%	0.91%	0.22%
39	207.65446	208.39401	294.19116	0.07%	0.43%	0.25%
40	207.20835	210.00167	295.01864	0.14%	1.21%	0.53%
41	207.65446	208.39401	294.19116	0.07%	0.43%	0.25%
42	206.52646	209.38889	294.10353	0.47%	0.91%	0.22%
43	206.09681	206.11486	291.47766	0.68%	0.67%	0.67%
44	205.30612	207.44253	291.86128	1.06%	0.03%	0.54%
45	206.09681	206.11486	291.47766	0.68%	0.67%	0.67%
46	207.16523	209.42125	294.57545	0.16%	0.93%	0.38%
47	207.12854	209.30022	294.46361	0.18%	0.87%	0.35%
48	206.23810	208.27808	293.11075	0.61%	0.37%	0.12%
49	206.46075	208.43210	293.37686	0.50%	0.45%	0.02%
50	207.01690	208.06860	293.51072	0.23%	0.27%	0.02%
			Rata-rata:	0.43%	0.61%	0.34%

Kasus 4
Hasil Iterasi Steepest Descent R=1.25m; k = 3.14

Steepest Descent Iterasi 1

	P Hasil Iterasi 1			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	364.27870	121.47336	383.99837	3.33%	1.26%	2.89%
2	371.83319	127.97736	393.24055	1.32%	6.68%	0.56%
3	371.68404	122.62144	391.38861	1.36%	2.22%	1.03%
4	371.83319	127.97736	393.24055	1.32%	6.68%	0.56%
5	364.27870	121.47336	383.99837	3.33%	1.26%	2.89%
6	368.52719	117.07551	386.67682	2.20%	2.40%	2.22%
7	350.86532	117.36714	369.97503	6.89%	2.16%	6.44%
8	368.52719	117.07551	386.67682	2.20%	2.40%	2.22%
9	370.06498	127.57550	391.43786	1.79%	6.35%	1.01%
10	372.89696	126.89647	393.89701	1.04%	5.78%	0.39%
11	372.89696	126.89647	393.89701	1.04%	5.78%	0.39%
12	368.27553	125.85519	389.18684	2.26%	4.91%	1.58%
13	360.48813	112.28565	377.57087	4.33%	6.40%	4.52%
14	356.04271	112.17275	373.29498	5.51%	6.49%	5.60%
15	356.04271	112.17275	373.29498	5.51%	6.49%	5.60%
16	362.08119	112.80361	379.24589	3.91%	5.97%	4.10%
17	368.04544	121.82707	387.68451	2.33%	1.56%	1.96%
18	363.32451	126.67966	384.77582	3.58%	5.60%	2.70%
19	371.83319	127.97736	393.24055	1.32%	6.68%	0.56%
20	363.32451	126.67966	384.77582	3.58%	5.60%	2.70%
21	368.04544	121.82707	387.68451	2.33%	1.56%	1.96%
22	361.63880	100.16749	375.25477	4.03%	16.50%	5.11%
23	368.52719	117.07551	386.67682	2.20%	2.40%	2.22%
24	361.63880	100.16749	375.25477	4.03%	16.50%	5.11%
25	368.27553	125.85519	389.18684	2.26%	4.91%	1.58%
26	370.06498	127.57550	391.43786	1.79%	6.35%	1.01%
27	362.08119	112.80361	379.24589	3.91%	5.97%	4.10%
28	360.48813	112.28565	377.57087	4.33%	6.40%	4.52%
29	364.27870	121.47336	383.99837	3.33%	1.26%	2.89%
30	368.27553	125.85519	389.18684	2.26%	4.91%	1.58%
31	372.89696	126.89647	393.89701	1.04%	5.78%	0.39%
32	372.89696	126.89647	393.89701	1.04%	5.78%	0.39%
33	370.06498	127.57550	391.43786	1.79%	6.35%	1.01%
34	362.08119	112.80361	379.24589	3.91%	5.97%	4.10%
35	356.04271	112.17275	373.29498	5.51%	6.49%	5.60%
36	356.04271	112.17275	373.29498	5.51%	6.49%	5.60%
37	360.48813	112.28565	377.57087	4.33%	6.40%	4.52%
38	368.04544	121.82707	387.68451	2.33%	1.56%	1.96%
39	363.32451	126.67966	384.77582	3.58%	5.60%	2.70%
40	371.83319	127.97736	393.24055	1.32%	6.68%	0.56%
41	363.32451	126.67966	384.77582	3.58%	5.60%	2.70%
42	368.04544	121.82707	387.68451	2.33%	1.56%	1.96%
43	361.63880	100.16749	375.25477	4.03%	16.50%	5.11%
44	368.52719	117.07551	386.67682	2.20%	2.40%	2.22%

45	361.63880	100.16749	375.25477	4.03%	16.50%	5.11%
46	370.06498	127.57550	391.43786	1.79%	6.35%	1.01%
47	368.27553	125.85519	389.18684	2.26%	4.91%	1.58%
48	360.48813	112.28565	377.57087	4.33%	6.40%	4.52%
49	362.08119	112.80361	379.24589	3.91%	5.97%	4.10%
50	364.27870	121.47336	383.99837	3.33%	1.26%	2.89%
			Rata-rata :	3.01%	5.68%	2.76%

Steepest Descent Iterasi 2

	P Hasil Iterasi 2			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	369.81143	110.81612	386.05790	1.86%	7.62%	2.37%
2	381.10572	109.51797	396.52965	1.14%	8.70%	0.27%
3	380.48784	106.69914	395.16541	0.98%	11.05%	0.07%
4	381.10572	109.51797	396.52965	1.14%	8.70%	0.27%
5	369.81143	110.81612	386.05790	1.86%	7.62%	2.37%
6	370.55619	109.78138	386.47619	1.66%	8.49%	2.27%
7	352.67940	112.61341	370.22229	6.40%	6.12%	6.38%
8	370.55619	109.78138	386.47619	1.66%	8.49%	2.27%
9	378.03347	112.21109	394.33569	0.32%	6.46%	0.28%
10	382.09640	109.28400	397.41748	1.40%	8.90%	0.50%
11	382.09640	109.28400	397.41748	1.40%	8.90%	0.50%
12	375.92987	110.75122	391.90445	0.23%	7.68%	0.90%
13	363.15741	103.97399	377.74846	3.62%	13.33%	4.47%
14	357.33008	106.12172	372.75543	5.17%	11.54%	5.74%
15	357.33008	106.12172	372.75543	5.17%	11.54%	5.74%
16	364.80383	104.19429	379.39199	3.19%	13.14%	4.06%
17	373.42622	109.55456	389.16493	0.90%	8.67%	1.59%
18	371.72693	109.64166	387.55929	1.35%	8.60%	1.99%
19	381.10572	109.51797	396.52965	1.14%	8.70%	0.27%
20	371.72693	109.64166	387.55929	1.35%	8.60%	1.99%
21	373.42622	109.55456	389.16493	0.90%	8.67%	1.59%
22	362.07789	93.08900	373.85286	3.91%	22.40%	5.46%
23	370.55619	109.78138	386.47619	1.66%	8.49%	2.27%
24	362.07789	93.08900	373.85286	3.91%	22.40%	5.46%
25	375.92987	110.75122	391.90445	0.23%	7.68%	0.90%
26	378.03347	112.21109	394.33569	0.32%	6.46%	0.28%
27	364.80383	104.19429	379.39199	3.19%	13.14%	4.06%
28	363.15741	103.97399	377.74846	3.62%	13.33%	4.47%
29	369.81143	110.81612	386.05790	1.86%	7.62%	2.37%
30	375.92987	110.75122	391.90445	0.23%	7.68%	0.90%
31	382.09640	109.28400	397.41748	1.40%	8.90%	0.50%
32	382.09640	109.28400	397.41748	1.40%	8.90%	0.50%
33	378.03347	112.21109	394.33569	0.32%	6.46%	0.28%
34	364.80383	104.19429	379.39199	3.19%	13.14%	4.06%
35	357.33008	106.12172	372.75543	5.17%	11.54%	5.74%
36	357.33008	106.12172	372.75543	5.17%	11.54%	5.74%
37	363.15741	103.97399	377.74846	3.62%	13.33%	4.47%
38	373.42622	109.55456	389.16493	0.90%	8.67%	1.59%
39	371.72693	109.64166	387.55929	1.35%	8.60%	1.99%
40	381.10572	109.51797	396.52965	1.14%	8.70%	0.27%

41	371.72693	109.64166	387.55929	1.35%	8.60%	1.99%
42	373.42622	109.55456	389.16493	0.90%	8.67%	1.59%
43	362.07789	93.08900	373.85286	3.91%	22.40%	5.46%
44	370.55619	109.78138	386.47619	1.66%	8.49%	2.27%
45	362.07789	93.08900	373.85286	3.91%	22.40%	5.46%
46	378.03347	112.21109	394.33569	0.32%	6.46%	0.28%
47	375.92987	110.75122	391.90445	0.23%	7.68%	0.90%
48	363.15741	103.97399	377.74846	3.62%	13.33%	4.47%
49	364.80383	104.19429	379.39199	3.19%	13.14%	4.06%
50	369.81143	110.81612	386.05790	1.86%	7.62%	2.37%
			Rata-rata	2.13%	10.39%	2.52%

Steepest Descent Iterasi 3

	Hasil Iterasi 3			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	363.71580	122.56880	383.81283	3.48%	2.17%	2.94%
2	375.82655	121.43505	394.95831	0.26%	1.23%	0.12%
3	371.97365	117.15661	389.98727	1.28%	2.34%	1.38%
4	375.82655	121.43505	394.95831	0.26%	1.23%	0.12%
5	363.71580	122.56880	383.81283	3.48%	2.17%	2.94%
6	365.84680	122.92340	385.94565	2.91%	2.47%	2.40%
7	348.67871	124.98615	370.40300	7.47%	4.19%	6.33%
8	365.84680	122.92340	385.94565	2.91%	2.47%	2.40%
9	372.93716	124.45351	393.15493	1.03%	3.75%	0.58%
10	375.22942	120.46269	394.09184	0.42%	0.42%	0.34%
11	375.22942	120.46269	394.09184	0.42%	0.42%	0.34%
12	370.81586	122.71759	390.59443	1.59%	2.30%	1.23%
13	357.63014	115.77734	375.90385	5.09%	3.49%	4.94%
14	353.54232	118.73661	372.94847	6.17%	1.02%	5.69%
15	353.54232	118.73661	372.94847	6.17%	1.02%	5.69%
16	359.39454	116.14228	377.69493	4.62%	3.18%	4.49%
17	368.17883	121.77771	387.79564	2.29%	1.52%	1.93%
18	366.87802	120.93273	386.29549	2.64%	0.81%	2.31%
19	375.82655	121.43505	394.95831	0.26%	1.23%	0.12%
20	366.87802	120.93273	386.29549	2.64%	0.81%	2.31%
21	368.17883	121.77771	387.79564	2.29%	1.52%	1.93%
22	357.66656	104.85591	372.71991	5.08%	12.59%	5.75%
23	365.84680	122.92340	385.94565	2.91%	2.47%	2.40%
24	357.66656	104.85591	372.71991	5.08%	12.59%	5.75%
25	370.81586	122.71759	390.59443	1.59%	2.30%	1.23%
26	372.93716	124.45351	393.15493	1.03%	3.75%	0.58%
27	359.39454	116.14228	377.69493	4.62%	3.18%	4.49%
28	357.63014	115.77734	375.90385	5.09%	3.49%	4.94%
29	363.71580	122.56880	383.81283	3.48%	2.17%	2.94%
30	370.81586	122.71759	390.59443	1.59%	2.30%	1.23%
31	375.22942	120.46269	394.09184	0.42%	0.42%	0.34%
32	375.22942	120.46269	394.09184	0.42%	0.42%	0.34%
33	372.93716	124.45351	393.15493	1.03%	3.75%	0.58%
34	359.39454	116.14228	377.69493	4.62%	3.18%	4.49%
35	353.54232	118.73661	372.94847	6.17%	1.02%	5.69%
36	353.54232	118.73661	372.94847	6.17%	1.02%	5.69%

37	357.63014	115.77734	375.90385	5.09%	3.49%	4.94%
38	368.17883	121.77771	387.79564	2.29%	1.52%	1.93%
39	366.87802	120.93273	386.29549	2.64%	0.81%	2.31%
40	375.82655	121.43505	394.95831	0.26%	1.23%	0.12%
41	366.87802	120.93273	386.29549	2.64%	0.81%	2.31%
42	368.17883	121.77771	387.79564	2.29%	1.52%	1.93%
43	357.66656	104.85591	372.71991	5.08%	12.59%	5.75%
44	365.84680	122.92340	385.94565	2.91%	2.47%	2.40%
45	357.66656	104.85591	372.71991	5.08%	12.59%	5.75%
46	372.93716	124.45351	393.15493	1.03%	3.75%	0.58%
47	370.81586	122.71759	390.59443	1.59%	2.30%	1.23%
48	357.63014	115.77734	375.90385	5.09%	3.49%	4.94%
49	359.39454	116.14228	377.69493	4.62%	3.18%	4.49%
50	363.71580	122.56880	383.81283	3.48%	2.17%	2.94%
			Rata-rata	3.02%	2.93%	2.77%

Steepest Descent Iterasi 4

	P Hasil Iterasi 4			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	365.64998	112.55034	382.58004	2.96%	6.18%	3.25%
2	377.17693	110.57779	393.05201	0.10%	7.82%	0.60%
3	376.60884	111.93530	392.89150	0.05%	6.69%	0.65%
4	377.17693	110.57779	393.05201	0.10%	7.82%	0.60%
5	365.64998	112.55034	382.58004	2.96%	6.18%	3.25%
6	366.71631	110.06185	382.87656	2.68%	8.25%	3.18%
7	347.93403	111.36975	365.32357	7.66%	7.16%	7.62%
8	366.71631	110.06185	382.87656	2.68%	8.25%	3.18%
9	373.96628	112.70981	390.58198	0.75%	6.04%	1.23%
10	378.16416	112.33953	394.49753	0.36%	6.35%	0.24%
11	378.16416	112.33953	394.49753	0.36%	6.35%	0.24%
12	371.69459	111.35795	388.01734	1.36%	7.17%	1.88%
13	359.10990	105.63218	374.32349	4.70%	11.94%	5.34%
14	353.02082	105.33236	368.40006	6.31%	12.19%	6.84%
15	353.02082	105.33236	368.40006	6.31%	12.19%	6.84%
16	360.80892	105.71240	375.97631	4.25%	11.88%	4.92%
17	369.34778	110.54548	385.53610	1.98%	7.85%	2.51%
18	367.37748	110.05795	383.50875	2.50%	8.25%	3.02%
19	377.17693	110.57779	393.05201	0.10%	7.82%	0.60%
20	367.37748	110.05795	383.50875	2.50%	8.25%	3.02%
21	369.34778	110.54548	385.53610	1.98%	7.85%	2.51%
22	357.73274	94.03867	369.88644	5.06%	21.61%	6.46%
23	366.71631	110.06185	382.87656	2.68%	8.25%	3.18%
24	357.73274	94.03867	369.88644	5.06%	21.61%	6.46%
25	371.69459	111.35795	388.01734	1.36%	7.17%	1.88%
26	373.96628	112.70981	390.58198	0.75%	6.04%	1.23%
27	360.80892	105.71240	375.97631	4.25%	11.88%	4.92%
28	359.10990	105.63218	374.32349	4.70%	11.94%	5.34%
29	365.64998	112.55034	382.58004	2.96%	6.18%	3.25%
30	371.69459	111.35795	388.01734	1.36%	7.17%	1.88%
31	378.16416	112.33953	394.49753	0.36%	6.35%	0.24%
32	378.16416	112.33953	394.49753	0.36%	6.35%	0.24%

33	373.96628	112.70981	390.58198	0.75%	6.04%	1.23%
34	360.80892	105.71240	375.97631	4.25%	11.88%	4.92%
35	353.02082	105.33236	368.40006	6.31%	12.19%	6.84%
36	353.02082	105.33236	368.40006	6.31%	12.19%	6.84%
37	359.10990	105.63218	374.32349	4.70%	11.94%	5.34%
38	369.34778	110.54548	385.53610	1.98%	7.85%	2.51%
39	367.37748	110.05795	383.50875	2.50%	8.25%	3.02%
40	377.17693	110.57779	393.05201	0.10%	7.82%	0.60%
41	367.37748	110.05795	383.50875	2.50%	8.25%	3.02%
42	369.34778	110.54548	385.53610	1.98%	7.85%	2.51%
43	357.73274	94.03867	369.88644	5.06%	21.61%	6.46%
44	366.71631	110.06185	382.87656	2.68%	8.25%	3.18%
45	357.73274	94.03867	369.88644	5.06%	21.61%	6.46%
46	373.96628	112.70981	390.58198	0.75%	6.04%	1.23%
47	371.69459	111.35795	388.01734	1.36%	7.17%	1.88%
48	359.10990	105.63218	374.32349	4.70%	11.94%	5.34%
49	360.80892	105.71240	375.97631	4.25%	11.88%	4.92%
50	365.64998	112.55034	382.58004	2.96%	6.18%	3.25%
			Rata-rata :	2.80%	9.52%	3.32%

Steepest Descent Iterasi 5

	P Hasil Iterasi 5			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	363.88696	123.38373	384.23595	3.43%	2.85%	2.83%
2	376.50600	121.46130	395.61296	0.08%	1.25%	0.04%
3	373.40440	123.03317	393.15138	0.90%	2.56%	0.58%
4	376.50600	121.46130	395.61296	0.08%	1.25%	0.04%
5	363.88696	123.38373	384.23595	3.43%	2.85%	2.83%
6	365.86832	121.76063	385.59730	2.90%	1.50%	2.49%
7	347.20701	121.44230	367.83276	7.86%	1.24%	6.98%
8	365.86832	121.76063	385.59730	2.90%	1.50%	2.49%
9	373.24011	123.56386	393.16180	0.95%	3.00%	0.58%
10	376.29646	123.32426	395.98978	0.14%	2.80%	0.14%
11	376.29646	123.32426	395.98978	0.14%	2.80%	0.14%
12	370.90462	121.98030	390.44773	1.57%	1.68%	1.26%
13	357.64262	116.64306	376.18326	5.09%	2.77%	4.87%
14	352.63958	116.03003	371.23798	6.41%	3.28%	6.12%
15	352.63958	116.03003	371.23798	6.41%	3.28%	6.12%
16	359.46433	116.82741	377.97255	4.60%	2.61%	4.42%
17	368.28253	121.62648	387.84665	2.26%	1.39%	1.92%
18	366.93274	120.16539	386.10796	2.62%	0.17%	2.36%
19	376.50600	121.46130	395.61296	0.08%	1.25%	0.04%
20	366.93274	120.16539	386.10796	2.62%	0.17%	2.36%
21	368.28253	121.62648	387.84665	2.26%	1.39%	1.92%
22	357.07963	104.77050	372.13266	5.24%	12.66%	5.90%
23	365.86832	121.76063	385.59730	2.90%	1.50%	2.49%
24	357.07963	104.77050	372.13266	5.24%	12.66%	5.90%
25	370.90462	121.98030	390.44773	1.57%	1.68%	1.26%
26	373.24011	123.56386	393.16180	0.95%	3.00%	0.58%
27	359.46433	116.82741	377.97255	4.60%	2.61%	4.42%
28	357.64262	116.64306	376.18326	5.09%	2.77%	4.87%

29	363.88696	123.38373	384.23595	3.43%	2.85%	2.83%
30	370.90462	121.98030	390.44773	1.57%	1.68%	1.26%
31	376.29646	123.32426	395.98978	0.14%	2.80%	0.14%
32	376.29646	123.32426	395.98978	0.14%	2.80%	0.14%
33	373.24011	123.56386	393.16180	0.95%	3.00%	0.58%
34	359.46433	116.82741	377.97255	4.60%	2.61%	4.42%
35	352.63958	116.03003	371.23798	6.41%	3.28%	6.12%
36	352.63958	116.03003	371.23798	6.41%	3.28%	6.12%
37	357.64262	116.64306	376.18326	5.09%	2.77%	4.87%
38	368.28253	121.62648	387.84665	2.26%	1.39%	1.92%
39	366.93274	120.16539	386.10796	2.62%	0.17%	2.36%
40	376.50600	121.46130	395.61296	0.08%	1.25%	0.04%
41	366.93274	120.16539	386.10796	2.62%	0.17%	2.36%
42	368.28253	121.62648	387.84665	2.26%	1.39%	1.92%
43	357.07963	104.77050	372.13266	5.24%	12.66%	5.90%
44	365.86832	121.76063	385.59730	2.90%	1.50%	2.49%
45	357.07963	104.77050	372.13266	5.24%	12.66%	5.90%
46	373.24011	123.56386	393.16180	0.95%	3.00%	0.58%
47	370.90462	121.98030	390.44773	1.57%	1.68%	1.26%
48	357.64262	116.64306	376.18326	5.09%	2.77%	4.87%
49	359.46433	116.82741	377.97255	4.60%	2.61%	4.42%
50	363.88696	123.38373	384.23595	3.43%	2.85%	2.83%
			Rata-rata :	3.00%	2.95%	2.79%

Steepest Descent Iterasi 6

	P Hasil Iterasi 6			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	364.13611	113.46085	381.40329	3.36%	5.42%	3.55%
2	375.17720	110.95320	391.23975	0.43%	7.51%	1.06%
3	376.24379	114.05831	393.15224	0.15%	4.92%	0.58%
4	375.17720	110.95320	391.23975	0.43%	7.51%	1.06%
5	364.13611	113.46085	381.40329	3.36%	5.42%	3.55%
6	365.34464	110.03864	381.55630	3.04%	8.27%	3.51%
7	345.23125	111.50557	362.79210	8.38%	7.05%	8.26%
8	365.34464	110.03864	381.55630	3.04%	8.27%	3.51%
9	371.80219	113.01442	388.59892	1.33%	5.79%	1.73%
10	376.91427	113.51778	393.63772	0.03%	5.37%	0.46%
11	376.91427	113.51778	393.63772	0.03%	5.37%	0.46%
12	369.45391	111.78829	385.99587	1.95%	6.81%	2.39%
13	357.95271	106.29796	373.40246	5.00%	11.39%	5.57%
14	350.89879	105.21501	366.33340	6.88%	12.29%	7.36%
15	350.89879	105.21501	366.33340	6.88%	12.29%	7.36%
16	359.65009	106.27457	375.02329	4.55%	11.41%	5.16%
17	367.66345	111.00789	384.05620	2.43%	7.46%	2.88%
18	364.87059	110.32055	381.18391	3.17%	8.04%	3.61%
19	375.17720	110.95320	391.23975	0.43%	7.51%	1.06%
20	364.87059	110.32055	381.18391	3.17%	8.04%	3.61%
21	367.66345	111.00789	384.05620	2.43%	7.46%	2.88%
22	356.27322	94.38903	368.56465	5.45%	21.32%	6.80%
23	365.34464	110.03864	381.55630	3.04%	8.27%	3.51%
24	356.27322	94.38903	368.56465	5.45%	21.32%	6.80%

25	369.45391	111.78829	385.99587	1.95%	6.81%	2.39%
26	371.80219	113.01442	388.59892	1.33%	5.79%	1.73%
27	359.65009	106.27457	375.02329	4.55%	11.41%	5.16%
28	357.95271	106.29796	373.40246	5.00%	11.39%	5.57%
29	364.13611	113.46085	381.40329	3.36%	5.42%	3.55%
30	369.45391	111.78829	385.99587	1.95%	6.81%	2.39%
31	376.91427	113.51778	393.63772	0.03%	5.37%	0.46%
32	376.91427	113.51778	393.63772	0.03%	5.37%	0.46%
33	371.80219	113.01442	388.59892	1.33%	5.79%	1.73%
34	359.65009	106.27457	375.02329	4.55%	11.41%	5.16%
35	350.89879	105.21501	366.33340	6.88%	12.29%	7.36%
36	350.89879	105.21501	366.33340	6.88%	12.29%	7.36%
37	357.95271	106.29796	373.40246	5.00%	11.39%	5.57%
38	367.66345	111.00789	384.05620	2.43%	7.46%	2.88%
39	364.87059	110.32055	381.18391	3.17%	8.04%	3.61%
40	375.17720	110.95320	391.23975	0.43%	7.51%	1.06%
41	364.87059	110.32055	381.18391	3.17%	8.04%	3.61%
42	367.66345	111.00789	384.05620	2.43%	7.46%	2.88%
43	356.27322	94.38903	368.56465	5.45%	21.32%	6.80%
44	365.34464	110.03864	381.55630	3.04%	8.27%	3.51%
45	356.27322	94.38903	368.56465	5.45%	21.32%	6.80%
46	371.80219	113.01442	388.59892	1.33%	5.79%	1.73%
47	369.45391	111.78829	385.99587	1.95%	6.81%	2.39%
48	357.95271	106.29796	373.40246	5.00%	11.39%	5.57%
49	359.65009	106.27457	375.02329	4.55%	11.41%	5.16%
50	364.13611	113.46085	381.40329	3.36%	5.42%	3.55%
			Rata-rata :	3.18%	9.13%	3.70%

Steepest Descent Iterasi 7

	P Hasil Iterasi 7			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	364.19706	123.81209	384.66730	3.35%	3.21%	2.73%
2	376.25461	121.29164	395.32163	0.15%	1.11%	0.03%
3	375.48955	125.12972	395.79016	0.35%	4.31%	0.09%
4	376.25461	121.29164	395.32163	0.15%	1.11%	0.03%
5	364.19706	123.81209	384.66730	3.35%	3.21%	2.73%
6	366.32465	120.98641	385.78680	2.78%	0.86%	2.44%
7	345.64824	120.73403	366.12759	8.27%	0.65%	7.41%
8	366.32465	120.98641	385.78680	2.78%	0.86%	2.44%
9	372.69014	123.23836	392.53743	1.09%	2.73%	0.74%
10	377.15386	124.20375	397.07884	0.09%	3.54%	0.41%
11	377.15386	124.20375	397.07884	0.09%	3.54%	0.41%
12	370.25062	121.80353	389.77124	1.74%	1.54%	1.43%
13	358.42792	116.79128	376.97583	4.88%	2.64%	4.67%
14	351.95410	115.08481	370.29205	6.60%	4.06%	6.36%
15	351.95410	115.08481	370.29205	6.60%	4.06%	6.36%
16	360.25645	116.85394	378.73414	4.39%	2.59%	4.23%
17	368.36220	121.51024	387.88587	2.24%	1.29%	1.91%
18	365.99723	119.83466	385.11598	2.87%	0.10%	2.61%
19	376.25461	121.29164	395.32163	0.15%	1.11%	0.03%
20	365.99723	119.83466	385.11598	2.87%	0.10%	2.61%

21	368.36220	121.51024	387.88587	2.24%	1.29%	1.91%
22	357.48023	104.47977	372.43541	5.13%	12.90%	5.82%
23	366.32465	120.98641	385.78680	2.78%	0.86%	2.44%
24	357.48023	104.47977	372.43541	5.13%	12.90%	5.82%
25	370.25062	121.80353	389.77124	1.74%	1.54%	1.43%
26	372.69014	123.23836	392.53743	1.09%	2.73%	0.74%
27	360.25645	116.85394	378.73414	4.39%	2.59%	4.23%
28	358.42792	116.79128	376.97583	4.88%	2.64%	4.67%
29	364.19706	123.81209	384.66730	3.35%	3.21%	2.73%
30	370.25062	121.80353	389.77124	1.74%	1.54%	1.43%
31	377.15386	124.20375	397.07884	0.09%	3.54%	0.41%
32	377.15386	124.20375	397.07884	0.09%	3.54%	0.41%
33	372.69014	123.23836	392.53743	1.09%	2.73%	0.74%
34	360.25645	116.85394	378.73414	4.39%	2.59%	4.23%
35	351.95410	115.08481	370.29205	6.60%	4.06%	6.36%
36	351.95410	115.08481	370.29205	6.60%	4.06%	6.36%
37	358.42792	116.79128	376.97583	4.88%	2.64%	4.67%
38	368.36220	121.51024	387.88587	2.24%	1.29%	1.91%
39	365.99723	119.83466	385.11598	2.87%	0.10%	2.61%
40	376.25461	121.29164	395.32163	0.15%	1.11%	0.03%
41	365.99723	119.83466	385.11598	2.87%	0.10%	2.61%
42	368.36220	121.51024	387.88587	2.24%	1.29%	1.91%
43	357.48023	104.47977	372.43541	5.13%	12.90%	5.82%
44	366.32465	120.98641	385.78680	2.78%	0.86%	2.44%
45	357.48023	104.47977	372.43541	5.13%	12.90%	5.82%
46	372.69014	123.23836	392.53743	1.09%	2.73%	0.74%
47	370.25062	121.80353	389.77124	1.74%	1.54%	1.43%
48	358.42792	116.79128	376.97583	4.88%	2.64%	4.67%
49	360.25645	116.85394	378.73414	4.39%	2.59%	4.23%
50	364.19706	123.81209	384.66730	3.35%	3.21%	2.73%
			Rata-rata :	3.00%	3.03%	2.82%

Steepest Descent Iterasi 8

	P Hasil Iterasi 8			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	363.27414	114.03800	380.75289	3.59%	4.94%	3.72%
2	373.79928	111.08895	389.95725	0.80%	7.40%	1.39%
3	376.31598	115.01880	393.50101	0.13%	4.12%	0.49%
4	373.79928	111.08895	389.95725	0.80%	7.40%	1.39%
5	363.27414	114.03800	380.75289	3.59%	4.94%	3.72%
6	364.48466	109.82940	380.67252	3.27%	8.44%	3.74%
7	343.46047	112.10752	361.29377	8.85%	6.55%	8.64%
8	364.48466	109.82940	380.67252	3.27%	8.44%	3.74%
9	370.34295	113.26234	387.27543	1.72%	5.58%	2.07%
10	376.18157	114.00689	393.07779	0.17%	4.96%	0.60%
11	376.18157	114.00689	393.07779	0.17%	4.96%	0.60%
12	367.94277	112.16087	384.65821	2.35%	6.50%	2.73%
13	357.30195	106.50472	372.83768	5.18%	11.22%	5.72%
14	349.47984	105.26523	364.98895	7.25%	12.25%	7.70%
15	349.47984	105.26523	364.98895	7.25%	12.25%	7.70%
16	358.98737	106.38433	374.41896	4.73%	11.32%	5.32%

17	366.60486	111.22754	383.10663	2.71%	7.28%	3.12%
18	363.05153	110.53812	379.50638	3.65%	7.85%	4.03%
19	373.79928	111.08895	389.95725	0.80%	7.40%	1.39%
20	363.05153	110.53812	379.50638	3.65%	7.85%	4.03%
21	366.60486	111.22754	383.10663	2.71%	7.28%	3.12%
22	355.30733	94.37108	367.62644	5.71%	21.33%	7.03%
23	364.48466	109.82940	380.67252	3.27%	8.44%	3.74%
24	355.30733	94.37108	367.62644	5.71%	21.33%	7.03%
25	367.94277	112.16087	384.65821	2.35%	6.50%	2.73%
26	370.34295	113.26234	387.27543	1.72%	5.58%	2.07%
27	358.98737	106.38433	374.41896	4.73%	11.32%	5.32%
28	357.30195	106.50472	372.83768	5.18%	11.22%	5.72%
29	363.27414	114.03800	380.75289	3.59%	4.94%	3.72%
30	367.94277	112.16087	384.65821	2.35%	6.50%	2.73%
31	376.18157	114.00689	393.07779	0.17%	4.96%	0.60%
32	376.18157	114.00689	393.07779	0.17%	4.96%	0.60%
33	370.34295	113.26234	387.27543	1.72%	5.58%	2.07%
34	358.98737	106.38433	374.41896	4.73%	11.32%	5.32%
35	349.47984	105.26523	364.98895	7.25%	12.25%	7.70%
36	349.47984	105.26523	364.98895	7.25%	12.25%	7.70%
37	357.30195	106.50472	372.83768	5.18%	11.22%	5.72%
38	366.60486	111.22754	383.10663	2.71%	7.28%	3.12%
39	363.05153	110.53812	379.50638	3.65%	7.85%	4.03%
40	373.79928	111.08895	389.95725	0.80%	7.40%	1.39%
41	363.05153	110.53812	379.50638	3.65%	7.85%	4.03%
42	366.60486	111.22754	383.10663	2.71%	7.28%	3.12%
43	355.30733	94.37108	367.62644	5.71%	21.33%	7.03%
44	364.48466	109.82940	380.67252	3.27%	8.44%	3.74%
45	355.30733	94.37108	367.62644	5.71%	21.33%	7.03%
46	370.34295	113.26234	387.27543	1.72%	5.58%	2.07%
47	367.94277	112.16087	384.65821	2.35%	6.50%	2.73%
48	357.30195	106.50472	372.83768	5.18%	11.22%	5.72%
49	358.98737	106.38433	374.41896	4.73%	11.32%	5.32%
50	363.27414	114.03800	380.75289	3.59%	4.94%	3.72%
			Rata-rata :	3.47%	8.94%	3.95%

Steepest Descent Iterasi 9

	P Hasil Iterasi 9			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	364.49375	124.13234	385.05134	3.27%	3.48%	2.63%
2	375.97149	121.12465	395.00093	0.22%	0.97%	0.11%
3	377.10240	125.96552	397.58462	0.08%	5.01%	0.54%
4	375.97149	121.12465	395.00093	0.22%	0.97%	0.11%
5	364.49375	124.13234	385.05134	3.27%	3.48%	2.63%
6	366.67056	120.32429	385.90833	2.69%	0.30%	2.41%
7	344.59733	121.01991	365.23026	8.55%	0.88%	7.64%
8	366.67056	120.32429	385.90833	2.69%	0.30%	2.41%
9	372.24114	123.18192	392.09342	1.21%	2.69%	0.85%
10	377.74140	124.46348	397.71815	0.25%	3.75%	0.58%
11	377.74140	124.46348	397.71815	0.25%	3.75%	0.58%
12	369.72610	121.88619	389.29890	1.88%	1.61%	1.55%

13	359.04423	116.64827	377.51765	4.71%	2.76%	4.53%
14	351.47605	114.72069	369.72456	6.72%	4.37%	6.50%
15	351.47605	114.72069	369.72456	6.72%	4.37%	6.50%
16	360.87305	116.60036	379.24267	4.23%	2.80%	4.10%
17	368.43376	121.40741	387.92163	2.22%	1.21%	1.90%
18	365.14611	119.73870	384.27729	3.10%	0.18%	2.82%
19	375.97149	121.12465	395.00093	0.22%	0.97%	0.11%
20	365.14611	119.73870	384.27729	3.10%	0.18%	2.82%
21	368.43376	121.40741	387.92163	2.22%	1.21%	1.90%
22	357.74953	104.01346	372.56345	5.06%	13.29%	5.79%
23	366.67056	120.32429	385.90833	2.69%	0.30%	2.41%
24	357.74953	104.01346	372.56345	5.06%	13.29%	5.79%
25	369.72610	121.88619	389.29890	1.88%	1.61%	1.55%
26	372.24114	123.18192	392.09342	1.21%	2.69%	0.85%
27	360.87305	116.60036	379.24267	4.23%	2.80%	4.10%
28	359.04423	116.64827	377.51765	4.71%	2.76%	4.53%
29	364.49375	124.13234	385.05134	3.27%	3.48%	2.63%
30	369.72610	121.88619	389.29890	1.88%	1.61%	1.55%
31	377.74140	124.46348	397.71815	0.25%	3.75%	0.58%
32	377.74140	124.46348	397.71815	0.25%	3.75%	0.58%
33	372.24114	123.18192	392.09342	1.21%	2.69%	0.85%
34	360.87305	116.60036	379.24267	4.23%	2.80%	4.10%
35	351.47605	114.72069	369.72456	6.72%	4.37%	6.50%
36	351.47605	114.72069	369.72456	6.72%	4.37%	6.50%
37	359.04423	116.64827	377.51765	4.71%	2.76%	4.53%
38	368.43376	121.40741	387.92163	2.22%	1.21%	1.90%
39	365.14611	119.73870	384.27729	3.10%	0.18%	2.82%
40	375.97149	121.12465	395.00093	0.22%	0.97%	0.11%
41	365.14611	119.73870	384.27729	3.10%	0.18%	2.82%
42	368.43376	121.40741	387.92163	2.22%	1.21%	1.90%
43	357.74953	104.01346	372.56345	5.06%	13.29%	5.79%
44	366.67056	120.32429	385.90833	2.69%	0.30%	2.41%
45	357.74953	104.01346	372.56345	5.06%	13.29%	5.79%
46	372.24114	123.18192	392.09342	1.21%	2.69%	0.85%
47	369.72610	121.88619	389.29890	1.88%	1.61%	1.55%
48	359.04423	116.64827	377.51765	4.71%	2.76%	4.53%
49	360.87305	116.60036	379.24267	4.23%	2.80%	4.10%
50	364.49375	124.13234	385.05134	3.27%	3.48%	2.63%
			Rata-rata :	3.02%	3.11%	2.87%

Steepest Descent Iterasi 10

P Hasil Iterasi 10			Error		
Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
362.63912	114.44918	380.27062	3.76%	4.59%	3.84%
372.64713	111.09416	388.85447	1.10%	7.39%	1.67%
376.41567	115.45563	393.72422	0.10%	3.75%	0.43%
372.64713	111.09416	388.85447	1.10%	7.39%	1.67%
362.63912	114.44918	380.27062	3.76%	4.59%	3.84%
363.72761	109.52408	379.85957	3.47%	8.70%	3.94%
342.17188	112.90359	360.31766	9.19%	5.88%	8.88%
363.72761	109.52408	379.85957	3.47%	8.70%	3.94%

369.18326	113.46072	386.22483	2.02%	5.42%	2.33%
375.56380	114.17703	392.53607	0.33%	4.82%	0.74%
375.56380	114.17703	392.53607	0.33%	4.82%	0.74%
366.74567	112.48926	383.60947	2.67%	6.23%	2.99%
356.73338	106.49702	372.29063	5.33%	11.22%	5.86%
348.33401	105.37533	363.92381	7.56%	12.16%	7.97%
348.33401	105.37533	363.92381	7.56%	12.16%	7.97%
358.39706	106.27710	373.82252	4.89%	11.41%	5.47%
365.75188	111.32195	382.31795	2.93%	7.20%	3.32%
361.50997	110.72284	378.08598	4.06%	7.70%	4.39%
372.64713	111.09416	388.85447	1.10%	7.39%	1.67%
361.50997	110.72284	378.08598	4.06%	7.70%	4.39%
365.75188	111.32195	382.31795	2.93%	7.20%	3.32%
354.38773	94.17989	366.68858	5.95%	21.49%	7.27%
363.72761	109.52408	379.85957	3.47%	8.70%	3.94%
354.38773	94.17989	366.68858	5.95%	21.49%	7.27%
366.74567	112.48926	383.60947	2.67%	6.23%	2.99%
369.18326	113.46072	386.22483	2.02%	5.42%	2.33%
358.39706	106.27710	373.82252	4.89%	11.41%	5.47%
356.73338	106.49702	372.29063	5.33%	11.22%	5.86%
362.63912	114.44918	380.27062	3.76%	4.59%	3.84%
366.74567	112.48926	383.60947	2.67%	6.23%	2.99%
375.56380	114.17703	392.53607	0.33%	4.82%	0.74%
375.56380	114.17703	392.53607	0.33%	4.82%	0.74%
369.18326	113.46072	386.22483	2.02%	5.42%	2.33%
358.39706	106.27710	373.82252	4.89%	11.41%	5.47%
348.33401	105.37533	363.92381	7.56%	12.16%	7.97%
348.33401	105.37533	363.92381	7.56%	12.16%	7.97%
356.73338	106.49702	372.29063	5.33%	11.22%	5.86%
365.75188	111.32195	382.31795	2.93%	7.20%	3.32%
361.50997	110.72284	378.08598	4.06%	7.70%	4.39%
372.64713	111.09416	388.85447	1.10%	7.39%	1.67%
361.50997	110.72284	378.08598	4.06%	7.70%	4.39%
365.75188	111.32195	382.31795	2.93%	7.20%	3.32%
354.38773	94.17989	366.68858	5.95%	21.49%	7.27%
363.72761	109.52408	379.85957	3.47%	8.70%	3.94%
354.38773	94.17989	366.68858	5.95%	21.49%	7.27%
369.18326	113.46072	386.22483	2.02%	5.42%	2.33%
366.74567	112.48926	383.60947	2.67%	6.23%	2.99%
356.73338	106.49702	372.29063	5.33%	11.22%	5.86%
358.39706	106.27710	373.82252	4.89%	11.41%	5.47%
362.63912	114.44918	380.27062	3.76%	4.59%	3.84%
		Rata-rata :	3.71%	8.86%	4.17%

Kasus 5
Hasil Iterasi Steepest Descent R=1.05m; k = 1

	Steepest Descent Iterasi 1			Error		
Node	REAL	IMAGINER	MAGNITUDA	REAL	IMAGINER	MAGNITUDA
1	315.91511	260.778344	409.643385	52.19%	25.68%	39.57%
2	314.58113	261.575188	409.124516	51.55%	26.06%	39.39%
3	314.57556	261.574530	409.119811	51.54%	26.06%	39.39%
4	314.57897	261.577376	409.124253	51.55%	26.06%	39.39%
5	314.58450	261.577978	409.128883	51.55%	26.06%	39.39%
6	314.57555	261.574514	409.119788	51.54%	26.06%	39.39%
7	314.57899	261.577394	409.124278	51.55%	26.06%	39.39%
8	311.85155	267.185976	410.657683	50.23%	28.76%	39.91%
9	312.45189	269.133037	412.381835	50.52%	29.70%	40.50%
10	311.84285	267.182178	410.648610	50.23%	28.76%	39.91%
11	312.45207	269.133075	412.381996	50.52%	29.70%	40.50%
12	311.84360	267.176490	410.645480	50.23%	28.76%	39.91%
13	312.45199	269.132938	412.381847	50.52%	29.70%	40.50%
14	311.85150	267.185927	410.657614	50.23%	28.76%	39.91%
15	312.45187	269.133010	412.381799	50.52%	29.70%	40.50%
16	311.84284	267.182166	410.648595	50.23%	28.76%	39.91%
17	312.45208	269.133076	412.381998	50.52%	29.70%	40.50%
18	311.84362	267.176503	410.645498	50.23%	28.76%	39.91%
19	312.45202	269.132965	412.381883	50.52%	29.70%	40.50%
20	306.70297	275.770345	412.451202	47.75%	32.90%	40.53%
21	306.70438	275.759619	412.445077	47.75%	32.90%	40.52%
22	306.69833	275.764299	412.443708	47.75%	32.90%	40.52%
23	306.70296	275.770328	412.451184	47.75%	32.90%	40.53%
24	306.70437	275.759611	412.445069	47.75%	32.90%	40.52%
25	306.69833	275.764307	412.443716	47.75%	32.90%	40.52%
26	299.21963	287.079024	414.664630	44.15%	38.35%	41.28%
27	300.31661	290.039757	417.508232	44.68%	39.78%	42.25%
28	299.22263	287.082090	414.668917	44.15%	38.35%	41.28%
29	300.31027	290.039012	417.503155	44.67%	39.78%	42.25%
30	299.22278	287.082050	414.668994	44.15%	38.35%	41.28%
31	300.31162	290.038981	417.504106	44.67%	39.78%	42.25%
32	299.21963	287.079012	414.664619	44.15%	38.35%	41.28%
33	300.31660	290.039746	417.508223	44.68%	39.78%	42.25%
34	299.22263	287.082084	414.668912	44.15%	38.35%	41.28%
35	300.31027	290.039012	417.503155	44.67%	39.78%	42.25%
36	299.22278	287.082056	414.668999	44.15%	38.35%	41.28%
37	300.31162	290.038991	417.504115	44.67%	39.78%	42.25%
38	290.19722	299.692853	417.169310	39.80%	44.43%	42.13%
39	290.19767	299.692333	417.169247	39.80%	44.43%	42.13%
40	290.19771	299.692357	417.169293	39.80%	44.43%	42.13%
41	290.19722	299.692843	417.169302	39.80%	44.43%	42.13%
42	290.19767	299.692328	417.169243	39.80%	44.43%	42.13%
43	290.19771	299.692361	417.169297	39.80%	44.43%	42.13%
44	278.77599	307.393559	414.978134	34.30%	48.14%	41.39%
45	279.69350	309.861099	417.423472	34.74%	49.33%	42.22%

46	278.77844	307.396151	414.981699	34.30%	48.14%	41.39%
47	279.69235	309.860946	417.422590	34.74%	49.33%	42.22%
48	278.77837	307.396204	414.981695	34.30%	48.14%	41.39%
49	279.68892	309.860593	417.420026	34.74%	49.33%	42.22%
50	278.77599	307.393551	414.978127	34.30%	48.14%	41.39%
51	279.69350	309.861092	417.423466	34.74%	49.33%	42.22%
52	278.77844	307.396147	414.981696	34.30%	48.14%	41.39%
53	279.69235	309.860946	417.422590	34.74%	49.33%	42.22%
54	278.77837	307.396207	414.981698	34.30%	48.14%	41.39%
55	279.68892	309.860600	417.420032	34.74%	49.33%	42.22%
56	268.97297	314.557652	413.875554	29.58%	51.59%	41.01%
57	268.97406	314.549089	413.869756	29.58%	51.59%	41.01%
58	268.96920	314.552786	413.869405	29.57%	51.59%	41.01%
59	268.97297	314.557646	413.875549	29.58%	51.59%	41.01%
60	268.97406	314.549086	413.869753	29.58%	51.59%	41.01%
61	268.96920	314.552789	413.869408	29.57%	51.59%	41.01%
62	261.47259	320.876495	413.919846	25.96%	54.64%	41.03%
63	262.05019	322.200852	415.311557	26.24%	55.28%	41.50%
64	261.46852	320.875820	413.916754	25.96%	54.64%	41.03%
65	262.04778	322.198461	415.308185	26.24%	55.28%	41.50%
66	261.46895	320.871838	413.913938	25.96%	54.64%	41.02%
67	262.05010	322.200880	415.311526	26.24%	55.28%	41.50%
68	261.47259	320.876491	413.919842	25.96%	54.64%	41.03%
69	262.05019	322.200849	415.311554	26.24%	55.28%	41.50%
70	261.46852	320.875818	413.916753	25.96%	54.64%	41.03%
71	262.04778	322.198461	415.308185	26.24%	55.28%	41.50%
72	261.46895	320.871840	413.913939	25.96%	54.64%	41.02%
73	262.05011	322.200883	415.311530	26.24%	55.28%	41.50%
74	257.05771	324.754666	414.179019	23.84%	56.51%	41.11%
75	257.05375	324.754090	414.176107	23.83%	56.51%	41.11%
76	257.05171	324.751652	414.172932	23.83%	56.51%	41.11%
77	257.05771	324.754664	414.179017	23.84%	56.51%	41.11%
78	257.05375	324.754089	414.176106	23.83%	56.51%	41.11%
79	257.05171	324.751653	414.172933	23.83%	56.51%	41.11%
80	256.32278	326.881399	415.394775	23.48%	57.53%	41.53%
			Rata-rata :	38.69%	42.70%	41.08%

	SD Iterasi 2			Error		
Node	REAL	IMAGINER	MAGNITUDA	REAL	IMAGINER	MAGNITUDA
1	69.52185	159.41588	173.915815	66.51%	23.17%	40.75%
2	95.01528	172.68869	197.102223	54.23%	16.78%	32.85%
3	95.00854	172.68598	197.096598	54.23%	16.78%	32.85%
4	95.01141	172.68768	197.099471	54.23%	16.78%	32.85%
5	95.01562	172.69009	197.103614	54.23%	16.78%	32.85%
6	95.00824	172.68568	197.096195	54.23%	16.78%	32.85%
7	95.01170	172.68764	197.099580	54.23%	16.78%	32.85%
8	157.55480	214.27498	265.964809	24.10%	3.27%	9.38%
9	152.67162	217.16044	265.456743	26.45%	4.66%	9.56%
10	157.54980	214.26220	265.951554	24.10%	3.26%	9.39%
11	152.66509	217.15380	265.447552	26.45%	4.65%	9.56%
12	157.56438	214.26523	265.962634	24.09%	3.26%	9.38%

13	152.67491	217.16227	265.460125	26.45%	4.66%	9.56%
14	157.55471	214.27478	265.964599	24.10%	3.26%	9.38%
15	152.67134	217.16022	265.456401	26.45%	4.66%	9.56%
16	157.54939	214.26202	265.951166	24.10%	3.26%	9.39%
17	152.66488	217.15362	265.447289	26.45%	4.65%	9.56%
18	157.56597	214.26528	265.963617	24.09%	3.26%	9.38%
19	152.67500	217.16229	265.460195	26.45%	4.66%	9.56%
20	184.34700	194.14711	267.725451	11.19%	6.44%	8.78%
21	184.35093	194.13166	267.716956	11.19%	6.44%	8.79%
22	184.35195	194.14185	267.725048	11.19%	6.44%	8.78%
23	184.34726	194.14713	267.725640	11.19%	6.44%	8.78%
24	184.35051	194.13156	267.716593	11.19%	6.44%	8.79%
25	184.35151	194.14178	267.724685	11.19%	6.44%	8.78%
26	237.45869	177.29271	296.343268	14.39%	14.56%	0.97%
27	227.88057	184.79191	293.389853	9.78%	10.94%	0.04%
28	237.45992	177.28616	296.340339	14.39%	14.56%	0.97%
29	227.88015	184.79417	293.390945	9.78%	10.94%	0.04%
30	237.46334	177.28941	296.345021	14.40%	14.56%	0.97%
31	227.87111	184.80493	293.390708	9.78%	10.94%	0.04%
32	237.45887	177.29275	296.343441	14.39%	14.56%	0.97%
33	227.88051	184.79192	293.389813	9.78%	10.94%	0.04%
34	237.45963	177.28614	296.340095	14.39%	14.56%	0.97%
35	227.87960	184.79409	293.390472	9.78%	10.94%	0.04%
36	237.46282	177.28935	296.344567	14.40%	14.56%	0.97%
37	227.87063	184.80484	293.390275	9.77%	10.94%	0.04%
38	343.59882	217.93966	406.887996	65.53%	5.03%	38.63%
39	343.59189	217.93096	406.877492	65.52%	5.03%	38.63%
40	343.59133	217.93614	406.879788	65.52%	5.03%	38.63%
41	343.59893	217.93970	406.888113	65.53%	5.03%	38.63%
42	343.59172	217.93097	406.877345	65.52%	5.03%	38.63%
43	343.59104	217.93611	406.879527	65.52%	5.03%	38.63%
44	523.76645	307.95827	607.593280	152.32%	48.41%	107.01%
45	515.13053	313.78853	603.177178	148.16%	51.22%	105.51%
46	523.76251	307.94716	607.584248	152.32%	48.41%	107.01%
47	515.12309	313.79367	603.173494	148.16%	51.23%	105.51%
48	523.76952	307.95969	607.596641	152.32%	48.41%	107.01%
49	515.12719	313.79695	603.178701	148.16%	51.23%	105.51%
50	523.76659	307.95822	607.593369	152.32%	48.41%	107.01%
51	515.13051	313.78856	603.177173	148.16%	51.22%	105.51%
52	523.76234	307.94726	607.584151	152.32%	48.41%	107.01%
53	515.12288	313.79372	603.173344	148.16%	51.23%	105.51%
54	523.76921	307.95985	607.596454	152.32%	48.41%	107.01%
55	515.12700	313.79698	603.178556	148.16%	51.23%	105.51%
56	729.75899	461.39341	863.384071	251.56%	122.36%	194.16%
57	729.75109	461.37538	863.367760	251.55%	122.35%	194.16%
58	729.75714	461.40525	863.388837	251.55%	122.36%	194.16%
59	729.75907	461.39336	863.384118	251.56%	122.36%	194.16%
60	729.75098	461.37546	863.367713	251.55%	122.35%	194.16%
61	729.75695	461.40537	863.388743	251.55%	122.36%	194.16%
62	827.32171	510.64475	972.223879	298.56%	146.09%	231.25%
63	819.56576	511.93398	966.314870	294.82%	146.72%	229.23%

64	827.31948	510.63912	972.219022	298.55%	146.09%	231.24%
65	819.56967	511.93941	966.321066	294.82%	146.72%	229.23%
66	827.31082	510.63550	972.209754	298.55%	146.09%	231.24%
67	819.56890	511.93968	966.320559	294.82%	146.72%	229.23%
68	827.32176	510.64472	972.223905	298.56%	146.09%	231.25%
69	819.56575	511.93399	966.314872	294.82%	146.72%	229.23%
70	827.31942	510.63917	972.218999	298.55%	146.09%	231.24%
71	819.56957	511.93949	966.321025	294.82%	146.72%	229.23%
72	827.31071	510.63558	972.209705	298.55%	146.09%	231.24%
73	819.56881	511.93975	966.320517	294.82%	146.72%	229.23%
74	864.10186	521.86108	1009.460752	316.27%	151.50%	243.93%
75	864.09347	521.86646	1009.456353	316.27%	151.50%	243.93%
76	864.08781	521.86329	1009.449864	316.27%	151.50%	243.93%
77	864.10188	521.86107	1009.460763	316.27%	151.50%	243.93%
78	864.09344	521.86649	1009.456344	316.27%	151.50%	243.93%
79	864.08775	521.86333	1009.449844	316.27%	151.50%	243.93%
80	870.93091	529.18587	1019.096822	319.56%	155.03%	247.22%
			Rata-rata :	129.88%	56.82%	94.45%

	SD 3			Error		
Node	REAL	IMAGINER	MAGNITUDA	REAL	IMAGINER	MAGNITUDA
1	345.43872	357.63704	497.22446	66.41%	72.36%	69.41%
2	344.07560	360.57725	498.40142	65.76%	73.77%	69.81%
3	344.06544	360.57910	498.39574	65.75%	73.77%	69.81%
4	344.07294	360.58102	498.40230	65.75%	73.77%	69.81%
5	344.07888	360.58082	498.40626	65.76%	73.77%	69.81%
6	344.06522	360.57878	498.39536	65.75%	73.77%	69.81%
7	344.07338	360.58065	498.40234	65.75%	73.77%	69.81%
8	340.55784	389.48292	517.37471	64.06%	87.70%	76.27%
9	335.78768	394.04941	517.71450	61.76%	89.90%	76.39%
10	340.55245	389.47035	517.36169	64.06%	87.70%	76.27%
11	335.78297	394.04138	517.70534	61.76%	89.90%	76.39%
12	340.56369	389.46971	517.36861	64.06%	87.70%	76.27%
13	335.79251	394.04917	517.71745	61.77%	89.90%	76.39%
14	340.55818	389.48276	517.37481	64.06%	87.70%	76.27%
15	335.78760	394.04928	517.71435	61.76%	89.90%	76.39%
16	340.55196	389.47030	517.36134	64.06%	87.70%	76.27%
17	335.78285	394.04115	517.70508	61.76%	89.90%	76.39%
18	340.56788	389.46906	517.37088	64.07%	87.70%	76.27%
19	335.79250	394.04900	517.71732	61.77%	89.90%	76.39%
20	282.08460	337.11548	439.56634	35.89%	62.47%	49.76%
21	282.08504	337.09846	439.55357	35.89%	62.46%	49.76%
22	282.08768	337.11321	439.56658	35.89%	62.46%	49.76%
23	282.08525	337.11539	439.56669	35.89%	62.47%	49.76%
24	282.08451	337.09855	439.55330	35.89%	62.46%	49.76%
25	282.08711	337.11333	439.56631	35.89%	62.46%	49.76%
26	239.61448	285.02559	372.36364	15.43%	37.36%	26.87%
27	221.71991	293.96749	368.20728	6.81%	41.67%	25.45%
28	239.61297	285.02333	372.36094	15.43%	37.36%	26.87%
29	221.71546	293.96869	368.20556	6.81%	41.67%	25.45%
30	239.61929	285.02279	372.36460	15.43%	37.36%	26.87%

31	221.71496	293.97316	368.20883	6.81%	41.67%	25.45%
32	239.61482	285.02552	372.36381	15.43%	37.36%	26.87%
33	221.71998	293.96754	368.20736	6.81%	41.67%	25.45%
34	239.61274	285.02347	372.36091	15.43%	37.36%	26.87%
35	221.71477	293.96885	368.20528	6.81%	41.67%	25.45%
36	239.61864	285.02300	372.36434	15.43%	37.36%	26.87%
37	221.71421	293.97327	368.20847	6.81%	41.67%	25.45%
38	244.04827	293.80806	381.94599	17.57%	41.59%	30.13%
39	244.03781	293.80224	381.93482	17.56%	41.59%	30.13%
40	244.04150	293.80531	381.93954	17.57%	41.59%	30.13%
41	244.04844	293.80804	381.94607	17.57%	41.59%	30.13%
42	244.03775	293.80231	381.93484	17.56%	41.59%	30.13%
43	244.04129	293.80539	381.93947	17.56%	41.59%	30.13%
44	392.59419	386.06543	550.61485	89.13%	86.06%	87.60%
45	376.33135	393.14188	544.22957	81.29%	89.47%	85.42%
46	392.57786	386.04697	550.59027	89.12%	86.05%	87.59%
47	376.32805	393.15638	544.23777	81.29%	89.47%	85.43%
48	392.59169	386.06260	550.61109	89.13%	86.05%	87.60%
49	376.33526	393.15837	544.24418	81.30%	89.47%	85.43%
50	392.59440	386.06518	550.61483	89.13%	86.06%	87.60%
51	376.33140	393.14189	544.22961	81.29%	89.47%	85.42%
52	392.57774	386.04723	550.59037	89.12%	86.05%	87.59%
53	376.32792	393.15657	544.23781	81.29%	89.47%	85.43%
54	392.59136	386.06312	550.61121	89.13%	86.05%	87.60%
55	376.33508	393.15854	544.24418	81.30%	89.47%	85.43%
56	635.73789	614.56798	884.22648	206.26%	196.18%	201.26%
57	635.73259	614.54964	884.20992	206.26%	196.17%	201.26%
58	635.74353	614.58890	884.24507	206.26%	196.19%	201.27%
59	635.73803	614.56781	884.22646	206.26%	196.18%	201.26%
60	635.73252	614.54982	884.21000	206.26%	196.17%	201.26%
61	635.74332	614.58925	884.24517	206.26%	196.19%	201.27%
62	727.41530	664.71957	985.38578	250.43%	220.35%	235.73%
63	710.71599	663.17912	972.07189	242.38%	219.60%	231.19%
64	727.41294	664.70646	985.37519	250.43%	220.34%	235.73%
65	710.72703	663.19251	972.08909	242.39%	219.61%	231.20%
66	727.40643	664.70633	985.37029	250.42%	220.34%	235.72%
67	710.72337	663.18952	972.08438	242.39%	219.61%	231.20%
68	727.41538	664.71946	985.38576	250.43%	220.35%	235.73%
69	710.71601	663.17912	972.07191	242.38%	219.60%	231.19%
70	727.41290	664.70657	985.37524	250.43%	220.34%	235.73%
71	710.72694	663.19270	972.08916	242.39%	219.61%	231.20%
72	727.40631	664.70656	985.37036	250.42%	220.34%	235.72%
73	710.72326	663.18972	972.08444	242.39%	219.61%	231.20%
74	745.40070	661.08602	996.32170	259.09%	218.60%	239.46%
75	745.39121	661.08929	996.31677	259.09%	218.60%	239.45%
76	745.38755	661.08529	996.31138	259.08%	218.60%	239.45%
77	745.40074	661.08597	996.32169	259.09%	218.60%	239.46%
78	745.39119	661.08935	996.31680	259.09%	218.60%	239.45%
79	745.38750	661.08541	996.31142	259.08%	218.60%	239.45%
80	739.38334	664.66142	994.21453	256.19%	220.32%	238.74%
			Rata-rata :	108.72%	113.51%	111.50%

	SD Iterasi 4			Error		
Node	REAL	IMAGINER	MAGNITUDA	REAL	IMAGINER	MAGNITUDA
1	298.80019	133.21664	327.15169	43.94%	35.80%	11.46%
2	299.88750	151.34929	335.91534	44.47%	27.06%	14.45%
3	299.87955	151.35263	335.90975	44.46%	27.06%	14.45%
4	299.88781	151.35201	335.91685	44.47%	27.06%	14.45%
5	299.89023	151.35047	335.91832	44.47%	27.06%	14.45%
6	299.87942	151.35212	335.90941	44.46%	27.06%	14.45%
7	299.88860	151.35145	335.91730	44.47%	27.06%	14.45%
8	299.89406	224.22205	374.44890	44.47%	8.06%	27.58%
9	294.11531	227.58109	371.88300	41.69%	9.68%	26.70%
10	299.89171	224.21245	374.44127	44.47%	8.05%	27.58%
11	294.11001	227.56807	371.87085	41.69%	9.67%	26.70%
12	299.90191	224.21826	374.45291	44.48%	8.06%	27.58%
13	294.11969	227.57990	371.88574	41.69%	9.68%	26.70%
14	299.89444	224.22191	374.44912	44.47%	8.06%	27.58%
15	294.11525	227.58087	371.88282	41.69%	9.68%	26.70%
16	299.89120	224.21225	374.44074	44.47%	8.05%	27.58%
17	294.11015	227.56760	371.87067	41.69%	9.67%	26.70%
18	299.90857	224.21774	374.45794	44.48%	8.06%	27.58%
19	294.11997	227.57956	371.88575	41.69%	9.68%	26.70%
20	250.71720	195.37149	317.85080	20.78%	5.85%	8.29%
21	250.71575	195.35768	317.84118	20.78%	5.85%	8.29%
22	250.72091	195.37064	317.85321	20.78%	5.85%	8.30%
23	250.71784	195.37144	317.85128	20.78%	5.85%	8.29%
24	250.71519	195.35763	317.84070	20.78%	5.85%	8.29%
25	250.72055	195.37061	317.85291	20.78%	5.85%	8.30%
26	215.59221	166.94392	272.67247	3.86%	19.55%	7.10%
27	194.46127	174.23729	261.10117	6.32%	16.03%	11.04%
28	215.59028	166.94087	272.66908	3.86%	19.55%	7.10%
29	194.45517	174.23889	261.09769	6.32%	16.03%	11.04%
30	215.59685	166.93807	272.67255	3.86%	19.55%	7.10%
31	194.45656	174.24022	261.09961	6.32%	16.03%	11.04%
32	215.59242	166.94390	272.67262	3.86%	19.55%	7.10%
33	194.46129	174.23729	261.10118	6.32%	16.03%	11.04%
34	215.59010	166.94090	272.66895	3.86%	19.55%	7.10%
35	194.45453	174.23885	261.09719	6.32%	16.03%	11.04%
36	215.59633	166.93811	272.67217	3.86%	19.55%	7.10%
37	194.45592	174.24019	261.09912	6.32%	16.03%	11.04%
38	216.32704	197.06956	292.63254	4.21%	5.03%	0.30%
39	216.31336	197.06426	292.61885	4.21%	5.03%	0.30%
40	216.31864	197.06403	292.62259	4.21%	5.03%	0.30%
41	216.32708	197.06961	292.63260	4.21%	5.03%	0.30%
42	216.31335	197.06419	292.61879	4.21%	5.03%	0.30%
43	216.31862	197.06389	292.62249	4.21%	5.03%	0.30%
44	367.58378	320.03091	487.37831	77.08%	54.23%	66.05%
45	348.10587	324.46846	475.87549	67.70%	56.37%	62.13%
46	367.56483	320.00796	487.34895	77.07%	54.22%	66.04%
47	348.10439	324.48382	475.88488	67.70%	56.38%	62.14%
48	367.57907	320.02279	487.36943	77.08%	54.23%	66.05%

49	348.11459	324.48679	475.89436	67.70%	56.38%	62.14%
50	367.58398	320.03065	487.37829	77.08%	54.23%	66.05%
51	348.10588	324.46845	475.87548	67.70%	56.37%	62.13%
52	367.56464	320.00820	487.34896	77.07%	54.22%	66.04%
53	348.10427	324.48388	475.88483	67.70%	56.38%	62.14%
54	367.57867	320.02330	487.36946	77.08%	54.23%	66.05%
55	348.11447	324.48686	475.89432	67.70%	56.38%	62.14%
56	618.68537	613.69559	871.43207	198.05%	195.76%	196.90%
57	618.67911	613.67962	871.41639	198.04%	195.75%	196.90%
58	618.68995	613.72430	871.45555	198.05%	195.77%	196.91%
59	618.68552	613.69541	871.43205	198.05%	195.76%	196.90%
60	618.67897	613.67980	871.41642	198.04%	195.75%	196.90%
61	618.68967	613.72466	871.45560	198.05%	195.77%	196.91%
62	713.40015	669.10970	978.08362	243.67%	222.46%	233.24%
63	692.77664	662.88617	958.83134	233.74%	219.46%	226.68%
64	713.39882	669.09489	978.07252	243.67%	222.46%	233.24%
65	692.78936	662.90674	958.85475	233.75%	219.47%	226.69%
66	713.39131	669.09618	978.06792	243.67%	222.46%	233.24%
67	692.78470	662.89916	958.84615	233.74%	219.47%	226.69%
68	713.40024	669.10958	978.08361	243.67%	222.46%	233.24%
69	692.77665	662.88617	958.83135	233.74%	219.46%	226.68%
70	713.39873	669.09501	978.07253	243.67%	222.46%	233.24%
71	692.78921	662.90693	958.85478	233.75%	219.47%	226.69%
72	713.39114	669.09641	978.06795	243.67%	222.46%	233.24%
73	692.78455	662.89935	958.84618	233.74%	219.47%	226.69%
74	730.11419	655.53661	981.22117	251.73%	215.92%	234.31%
75	730.10439	655.53988	981.21606	251.72%	215.92%	234.31%
76	730.10135	655.53608	981.21126	251.72%	215.92%	234.31%
77	730.11423	655.53655	981.22116	251.73%	215.92%	234.31%
78	730.10435	655.53994	981.21607	251.72%	215.92%	234.31%
79	730.10127	655.53620	981.21128	251.72%	215.92%	234.31%
80	719.67484	654.66686	972.89289	246.70%	215.50%	231.47%
			Rata-rata :	96.47%	82.30%	86.65%

	SD Iterasi 5			Error		
Node	REAL	IMAGINER	MAGNITUDA	REAL	IMAGINER	MAGNITUDA
1	379.28676	215.50080	436.23279	82.72%	3.86%	48.63%
2	405.94444	238.46756	470.80534	95.56%	14.92%	60.41%
3	405.93151	238.47145	470.79616	95.55%	14.93%	60.40%
4	405.94447	238.47161	470.80741	95.56%	14.93%	60.41%
5	405.94772	238.46983	470.80931	95.56%	14.93%	60.41%
6	405.93154	238.47068	470.79579	95.55%	14.93%	60.40%
7	405.94652	238.47055	470.80864	95.56%	14.93%	60.41%
8	453.78171	349.12541	572.54379	118.61%	68.25%	95.07%
9	445.40286	354.37881	569.18191	114.57%	70.78%	93.93%
10	453.77279	349.11777	572.53206	118.60%	68.25%	95.07%
11	445.39281	354.35839	569.16133	114.56%	70.78%	93.92%
12	453.78702	349.12377	572.54700	118.61%	68.25%	95.07%
13	445.40603	354.37485	569.18193	114.57%	70.78%	93.93%
14	453.78201	349.12566	572.54419	118.61%	68.25%	95.07%
15	445.40268	354.37866	569.18168	114.57%	70.78%	93.93%

16	453.77209	349.11735	572.53125	118.60%	68.25%	95.07%
17	445.39375	354.35752	569.16152	114.56%	70.77%	93.92%
18	453.80125	349.12550	572.55933	118.62%	68.25%	95.08%
19	445.40737	354.37400	569.18244	114.57%	70.78%	93.93%
20	447.40483	319.77666	549.93472	115.53%	54.11%	87.37%
21	447.40196	319.75581	549.92025	115.53%	54.10%	87.36%
22	447.40091	319.76762	549.92627	115.53%	54.10%	87.36%
23	447.40554	319.77690	549.93544	115.53%	54.11%	87.37%
24	447.40121	319.75559	549.91952	115.53%	54.10%	87.36%
25	447.40101	319.76736	549.92620	115.53%	54.10%	87.36%
26	441.29615	287.70887	526.80043	112.59%	38.65%	79.49%
27	415.36614	294.87808	509.39387	100.10%	42.11%	73.55%
28	441.29290	287.70960	526.79810	112.59%	38.66%	79.48%
29	415.34833	294.87640	509.37837	100.09%	42.11%	73.55%
30	441.29976	287.70153	526.79944	112.59%	38.65%	79.49%
31	415.36120	294.87717	509.38931	100.10%	42.11%	73.55%
32	441.29614	287.70906	526.80052	112.59%	38.65%	79.49%
33	415.36605	294.87818	509.39385	100.10%	42.11%	73.55%
34	441.29276	287.70957	526.79796	112.59%	38.66%	79.48%
35	415.34766	294.87607	509.37763	100.09%	42.11%	73.55%
36	441.29940	287.70128	526.79900	112.59%	38.65%	79.48%
37	415.36065	294.87676	509.38863	100.10%	42.11%	73.55%
38	455.21683	289.32963	539.38298	119.30%	39.44%	83.77%
39	455.19171	289.32812	539.36097	119.28%	39.44%	83.76%
40	455.20202	289.32158	539.36616	119.29%	39.43%	83.77%
41	455.21667	289.32997	539.38303	119.30%	39.44%	83.77%
42	455.19176	289.32790	539.36089	119.28%	39.44%	83.76%
43	455.20230	289.32102	539.36610	119.29%	39.43%	83.77%
44	625.78147	401.92035	743.73545	201.47%	93.70%	153.40%
45	601.45632	401.40147	723.09947	189.75%	93.45%	146.37%
46	625.75868	401.88906	743.69936	201.45%	93.68%	153.38%
47	601.45528	401.42081	723.10934	189.75%	93.46%	146.37%
48	625.77568	401.89919	743.71914	201.46%	93.69%	153.39%
49	601.46821	401.42289	723.12125	189.75%	93.46%	146.37%
50	625.78192	401.92014	743.73571	201.47%	93.70%	153.40%
51	601.45627	401.40153	723.09947	189.75%	93.45%	146.37%
52	625.75816	401.88937	743.69909	201.45%	93.68%	153.38%
53	601.45502	401.42066	723.10904	189.75%	93.46%	146.37%
54	625.77471	401.89973	743.71862	201.46%	93.69%	153.39%
55	601.46800	401.42269	723.12097	189.75%	93.46%	146.37%
56	888.78414	794.67498	1192.24392	328.16%	282.98%	306.21%
57	888.77242	794.66184	1192.22642	328.16%	282.97%	306.20%
58	888.78103	794.71949	1192.27127	328.16%	283.00%	306.22%
59	888.78450	794.67484	1192.24410	328.16%	282.98%	306.21%
60	888.77201	794.66207	1192.22628	328.16%	282.97%	306.20%
61	888.78026	794.71987	1192.27095	328.16%	283.00%	306.22%
62	996.14240	820.30635	1290.42714	379.88%	295.33%	339.66%
63	969.23069	801.13525	1257.46801	366.92%	286.09%	328.43%
64	996.14048	820.28521	1290.41221	379.88%	295.32%	339.65%
65	969.24215	801.17160	1257.50001	366.92%	286.11%	328.44%
66	996.12928	820.28977	1290.40647	379.88%	295.32%	339.65%

67	969.23954	801.15467	1257.48722	366.92%	286.10%	328.44%
68	996.14265	820.30626	1290.42727	379.88%	295.33%	339.66%
69	969.23067	801.13528	1257.46803	366.92%	286.09%	328.43%
70	996.14021	820.28535	1290.41210	379.88%	295.32%	339.65%
71	969.24171	801.17182	1257.49981	366.92%	286.11%	328.44%
72	996.12877	820.29002	1290.40623	379.88%	295.32%	339.65%
73	969.23911	801.15486	1257.48700	366.92%	286.10%	328.44%
74	1014.67486	758.19561	1266.65925	388.81%	265.40%	331.56%
75	1014.66304	758.19904	1266.65183	388.81%	265.40%	331.56%
76	1014.65901	758.19488	1266.64612	388.80%	265.40%	331.56%
77	1014.67497	758.19555	1266.65931	388.81%	265.40%	331.56%
78	1014.66292	758.19912	1266.65178	388.81%	265.40%	331.56%
79	1014.65877	758.19502	1266.64601	388.80%	265.40%	331.56%
80	995.78256	738.18733	1239.55775	379.71%	255.75%	322.33%
			Rata-rata :	203.12%	126.64%	168.08%

Kasus 6
Hasil Iterasi Steepest Descent R=1.05m; k = 3.14

	P Hasil SD Iterasi 1			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	-24.47598	57.76828	62.73953	106.49%	51.82%	84.14%
2	-104.17136	42.93340	112.67187	127.64%	64.20%	71.51%
3	-103.99793	43.16503	112.60013	127.60%	64.00%	71.53%
4	-103.99831	43.16508	112.60050	127.60%	64.00%	71.53%
5	-104.17154	42.93345	112.67205	127.64%	64.20%	71.51%
6	-103.99800	43.16505	112.60020	127.60%	64.00%	71.53%
7	-103.99820	43.16507	112.60040	127.60%	64.00%	71.53%
8	-149.19997	47.84452	156.68353	139.59%	60.10%	60.38%
9	-51.48338	46.58179	69.42911	113.66%	61.15%	82.44%
10	-149.19986	47.86537	156.68979	139.59%	60.08%	60.38%
11	-51.31393	46.82789	69.46921	113.62%	60.95%	82.43%
12	-149.20089	47.86607	156.69099	139.59%	60.08%	60.38%
13	-51.48368	46.58193	69.42943	113.66%	61.15%	82.44%
14	-149.20019	47.84463	156.68377	139.59%	60.10%	60.38%
15	-51.48359	46.58188	69.42933	113.66%	61.15%	82.44%
16	-149.19999	47.86542	156.68994	139.59%	60.08%	60.38%
17	-51.31391	46.82791	69.46921	113.62%	60.95%	82.43%
18	-149.20072	47.86605	156.69083	139.59%	60.08%	60.38%
19	-51.48345	46.58186	69.42921	113.66%	61.15%	82.44%
20	-200.27242	95.27480	221.77991	153.14%	20.54%	43.92%
21	-200.47640	95.27752	221.96529	153.20%	20.54%	43.87%
22	-200.47483	95.27485	221.96273	153.20%	20.54%	43.87%
23	-200.27259	95.27495	221.78013	153.14%	20.54%	43.92%
24	-200.47441	95.27657	221.96309	153.20%	20.54%	43.87%
25	-200.47680	95.27584	221.96494	153.20%	20.54%	43.87%
26	-195.04618	99.76639	219.08069	151.76%	16.80%	44.60%
27	-20.55273	41.38353	46.20618	105.45%	65.49%	88.32%
28	-195.07635	99.78797	219.11737	151.76%	16.78%	44.59%
29	-20.65821	41.30121	46.17956	105.48%	65.56%	88.32%
30	-195.07626	99.78835	219.11746	151.76%	16.78%	44.59%
31	-20.55333	41.38275	46.20575	105.45%	65.49%	88.32%
32	-195.04624	99.76656	219.08082	151.76%	16.80%	44.60%
33	-20.55282	41.38367	46.20635	105.45%	65.49%	88.32%
34	-195.07646	99.78803	219.11749	151.77%	16.78%	44.59%
35	-20.65823	41.30122	46.17958	105.48%	65.56%	88.32%
36	-195.07617	99.78831	219.11736	151.76%	16.78%	44.59%
37	-20.55323	41.38263	46.20559	105.45%	65.49%	88.32%
38	-84.87366	140.07404	163.78118	122.52%	16.82%	58.59%
39	-84.53662	139.95806	163.50749	122.43%	16.72%	58.65%
40	-84.53636	139.95851	163.50774	122.43%	16.72%	58.65%
41	-84.87361	140.07420	163.78129	122.52%	16.82%	58.59%
42	-84.53666	139.95812	163.50756	122.43%	16.72%	58.65%
43	-84.53633	139.95844	163.50767	122.43%	16.72%	58.65%
44	-132.10920	120.54860	178.84296	135.06%	0.53%	54.78%
45	17.90461	70.53414	72.77115	95.25%	41.18%	81.60%

46	-132.15495	120.55418	178.88052	135.07%	0.54%	54.77%
47	17.79798	70.45794	72.67111	95.28%	41.24%	81.62%
48	-132.15461	120.55460	178.88055	135.07%	0.54%	54.77%
49	17.90449	70.53496	72.77191	95.25%	41.18%	81.60%
50	-132.10906	120.54877	178.84298	135.06%	0.53%	54.78%
51	17.90471	70.53425	72.77128	95.25%	41.18%	81.60%
52	-132.15491	120.55424	178.88053	135.07%	0.54%	54.77%
53	17.79783	70.45730	72.67045	95.28%	41.24%	81.62%
54	-132.15465	120.55451	178.88052	135.07%	0.54%	54.77%
55	17.90440	70.53482	72.77175	95.25%	41.18%	81.60%
56	-82.74042	134.95467	158.29953	121.96%	12.55%	59.97%
57	-82.92455	134.94185	158.38492	122.00%	12.54%	59.95%
58	-82.92150	134.94241	158.38380	122.00%	12.54%	59.95%
59	-82.74026	134.95478	158.29954	121.96%	12.55%	59.97%
60	-82.92447	134.94188	158.38491	122.00%	12.54%	59.95%
61	-82.92155	134.94233	158.38376	122.00%	12.54%	59.95%
62	-2.26689	121.79067	121.81176	100.60%	1.57%	69.20%
63	66.72901	123.17799	140.09132	82.29%	2.73%	64.58%
64	-2.28624	121.79669	121.81815	100.61%	1.57%	69.20%
65	66.83646	123.34358	140.28810	82.26%	2.86%	64.53%
66	-2.28667	121.79575	121.81722	100.61%	1.57%	69.20%
67	66.72925	123.17820	140.09162	82.29%	2.73%	64.58%
68	-2.26676	121.79073	121.81182	100.60%	1.57%	69.20%
69	66.72913	123.17804	140.09142	82.29%	2.73%	64.58%
70	-2.28616	121.79670	121.81816	100.61%	1.57%	69.20%
71	66.83648	123.34356	140.28809	82.26%	2.86%	64.53%
72	-2.28670	121.79570	121.81716	100.61%	1.57%	69.20%
73	66.72916	123.17813	140.09151	82.29%	2.73%	64.58%
74	60.79555	140.11885	152.73962	83.87%	16.85%	61.38%
75	60.91077	140.27693	152.93050	83.84%	16.99%	61.33%
76	60.91096	140.27696	152.93061	83.84%	16.99%	61.33%
77	60.79562	140.11888	152.73967	83.87%	16.85%	61.38%
78	60.91082	140.27692	152.93052	83.84%	16.99%	61.33%
79	60.91095	140.27693	152.93058	83.84%	16.99%	61.33%
80	128.29559	161.72921	206.43666	65.96%	34.88%	47.80%
			Rata-rata:	117.11%	29.61%	64.74%

	P Hasil SD Iterasi 2			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	-810.54671	-1044.55638	1322.15127	315.08%	971.12%	234.33%
2	-750.29891	-867.58521	1147.01899	299.10%	823.53%	190.04%
3	-750.10584	-867.32824	1146.69832	299.05%	823.32%	189.96%
4	-750.07872	-867.36544	1146.70872	299.04%	823.35%	189.96%
5	-750.29146	-867.58863	1147.01669	299.10%	823.53%	190.04%
6	-750.10570	-867.32846	1146.69840	299.05%	823.32%	189.96%
7	-750.08602	-867.36226	1146.71109	299.04%	823.34%	189.96%
8	-393.52761	-473.55965	615.72942	204.43%	494.93%	55.70%
9	-294.82236	-485.96791	568.40569	178.23%	505.28%	43.73%
10	-393.49298	-473.54760	615.69802	204.42%	494.92%	55.69%
11	-294.55084	-485.74994	568.07852	178.16%	505.10%	43.65%
12	-393.45114	-473.58200	615.69774	204.41%	494.95%	55.69%

13	-294.74749	-485.97208	568.37043	178.21%	505.28%	43.72%
14	-393.51536	-473.56178	615.72323	204.42%	494.93%	55.70%
15	-294.81449	-485.97002	568.40341	178.23%	505.28%	43.73%
16	-393.49280	-473.54791	615.69815	204.42%	494.92%	55.69%
17	-294.55833	-485.74832	568.08102	178.16%	505.09%	43.65%
18	-393.46308	-473.58009	615.70390	204.41%	494.95%	55.69%
19	-294.75973	-485.97060	568.37551	178.22%	505.28%	43.72%
20	160.77498	-294.12732	335.20065	57.34%	345.29%	15.24%
21	160.59836	-294.18547	335.16701	57.38%	345.34%	15.25%
22	160.69949	-294.14722	335.18191	57.36%	345.31%	15.24%
23	160.79194	-294.11993	335.20230	57.33%	345.28%	15.24%
24	160.59660	-294.18268	335.16372	57.38%	345.34%	15.25%
25	160.68468	-294.15780	335.18410	57.36%	345.32%	15.24%
26	598.82437	-307.30239	673.07161	58.90%	356.28%	70.20%
27	758.14810	-431.27640	872.23155	101.18%	459.67%	120.56%
28	598.74281	-307.38634	673.03738	58.88%	356.35%	70.19%
29	758.15858	-431.28147	872.24317	101.18%	459.67%	120.56%
30	598.83572	-307.27925	673.07114	58.91%	356.26%	70.20%
31	758.27338	-431.09622	872.25138	101.21%	459.52%	120.56%
32	598.83766	-307.27985	673.07313	58.91%	356.26%	70.20%
33	758.16426	-431.26741	872.24115	101.18%	459.66%	120.56%
34	598.74281	-307.38640	673.03741	58.88%	356.35%	70.19%
35	758.14251	-431.29059	872.23371	101.18%	459.68%	120.56%
36	598.82263	-307.30183	673.06980	58.90%	356.28%	70.20%
37	758.27580	-431.12338	872.26691	101.21%	459.54%	120.57%
38	742.96717	-260.05269	787.16429	97.15%	316.87%	99.05%
39	743.27353	-260.24478	787.51691	97.23%	317.03%	99.14%
40	743.35292	-260.19945	787.57686	97.25%	317.00%	99.15%
41	742.96389	-260.01956	787.15024	97.15%	316.85%	99.04%
42	743.27342	-260.24475	787.51680	97.23%	317.03%	99.14%
43	743.35606	-260.23265	787.59080	97.26%	317.02%	99.15%
44	382.24191	-88.96703	392.45893	1.43%	174.19%	0.76%
45	525.45260	-158.25351	548.76644	39.43%	231.98%	38.76%
46	382.14671	-88.91315	392.35399	1.41%	174.15%	0.79%
47	525.36274	-158.25056	548.67955	39.41%	231.97%	38.74%
48	382.18935	-88.92455	392.39810	1.42%	174.16%	0.78%
49	525.42974	-158.16667	548.71951	39.43%	231.90%	38.75%
50	382.22672	-88.92999	392.43574	1.43%	174.16%	0.77%
51	525.45839	-158.23163	548.76568	39.43%	231.96%	38.76%
52	382.14645	-88.91318	392.35374	1.41%	174.15%	0.79%
53	525.35181	-158.27112	548.67501	39.41%	231.99%	38.74%
54	382.20420	-88.96170	392.42099	1.42%	174.19%	0.77%
55	525.49296	-158.19519	548.78827	39.44%	231.93%	38.77%
56	-109.41714	269.10469	290.49862	129.03%	124.42%	26.54%
57	-109.55640	269.09781	290.54472	129.07%	124.42%	26.53%
58	-109.57046	269.09860	290.55076	129.08%	124.42%	26.53%
59	-109.43286	269.14049	290.53770	129.04%	124.45%	26.53%
60	-109.55677	269.09769	290.54475	129.07%	124.42%	26.53%
61	-109.55517	269.06268	290.51172	129.07%	124.39%	26.54%
62	-457.95255	328.94100	563.84636	221.52%	174.32%	42.58%
63	-403.70377	336.77559	525.73237	207.13%	180.86%	32.94%

64	-457.94923	328.96731	563.85902	221.52%	174.35%	42.58%
65	-403.57213	337.00670	525.77940	207.09%	181.05%	32.95%
66	-457.97129	328.98214	563.88558	221.53%	174.36%	42.59%
67	-403.73333	336.83789	525.79499	207.13%	180.91%	32.96%
68	-457.96256	328.97035	563.87162	221.52%	174.35%	42.58%
69	-403.70681	336.79263	525.74563	207.13%	180.87%	32.94%
70	-457.94957	328.96709	563.85916	221.52%	174.35%	42.58%
71	-403.56973	336.98930	525.76640	207.09%	181.04%	32.95%
72	-457.96163	328.95256	563.86048	221.52%	174.33%	42.58%
73	-403.71628	336.80480	525.76069	207.13%	180.88%	32.95%
74	-659.94024	241.23856	702.65010	275.12%	101.18%	77.68%
75	-659.80336	241.39343	702.57474	275.08%	101.31%	77.66%
76	-659.80900	241.40163	702.58285	275.09%	101.32%	77.66%
77	-659.94436	241.25399	702.65926	275.12%	101.20%	77.68%
78	-659.80362	241.39325	702.57492	275.08%	101.31%	77.66%
79	-659.80514	241.38602	702.57387	275.08%	101.31%	77.66%
80	-699.79001	227.62534	735.87998	285.69%	89.83%	86.08%
			Rata-rata:	147.76%	334.92%	65.04%

P Hasil SD Iterasi 3				Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	-203.32391	-359.18288	412.73836	153.95%	399.54%	4.37%
2	-209.81133	29.73579	211.90803	155.68%	75.20%	46.42%
3	-209.75079	29.97549	211.88186	155.66%	75.00%	46.42%
4	-209.67147	29.85160	211.78584	155.64%	75.10%	46.45%
5	-209.81973	29.72065	211.91422	155.68%	75.21%	46.41%
6	-209.75171	29.97503	211.88271	155.66%	75.00%	46.42%
7	-209.66401	29.86621	211.78052	155.64%	75.09%	46.45%
8	-72.12930	703.60537	707.29283	119.14%	486.78%	78.85%
9	38.33891	719.58663	720.60724	89.83%	500.11%	82.22%
10	-72.06940	703.67902	707.36000	119.12%	486.84%	78.87%
11	38.65469	719.68037	720.71772	89.74%	500.18%	82.24%
12	-71.97110	703.48958	707.16153	119.10%	486.68%	78.82%
13	38.47662	719.49115	720.51923	89.79%	500.03%	82.19%
14	-72.13643	703.58267	707.27098	119.14%	486.76%	78.84%
15	38.33261	719.56567	720.58597	89.83%	500.09%	82.21%
16	-72.07010	703.67832	707.35937	119.12%	486.84%	78.87%
17	38.65929	719.69974	720.73730	89.74%	500.20%	82.25%
18	-71.96522	703.51102	707.18226	119.10%	486.70%	78.82%
19	38.48796	719.50997	720.53864	89.79%	500.04%	82.20%
20	363.47661	564.92833	671.75834	3.55%	371.13%	69.86%
21	363.36483	564.84901	671.63115	3.58%	371.06%	69.83%
22	363.51468	564.76983	671.64565	3.54%	370.99%	69.84%
23	363.49210	564.91736	671.75750	3.54%	371.12%	69.86%
24	363.36108	564.84205	671.62327	3.58%	371.05%	69.83%
25	363.50164	564.78430	671.65077	3.54%	371.01%	69.84%
26	595.95182	-114.49831	606.85125	58.14%	195.49%	53.45%
27	716.61226	-258.05565	761.65993	90.16%	315.21%	92.60%
28	595.87458	-114.77548	606.82776	58.12%	195.72%	53.45%
29	716.79367	-257.93655	761.79028	90.21%	315.11%	92.63%
30	595.96912	-114.65812	606.89841	58.14%	195.62%	53.46%

31	716.78032	-257.67540	761.68933	90.20%	314.89%	92.60%
32	595.97704	-114.47714	606.87202	58.15%	195.47%	53.46%
33	716.64219	-258.07899	761.69600	90.17%	315.23%	92.61%
34	595.87592	-114.77747	606.82945	58.12%	195.72%	53.45%
35	716.76558	-257.91650	761.75706	90.20%	315.09%	92.62%
36	595.94366	-114.68147	606.87781	58.14%	195.64%	53.46%
37	716.79663	-257.71887	761.71939	90.21%	314.93%	92.61%
38	616.15695	-461.32762	769.72239	63.50%	484.73%	94.64%
39	616.27060	-461.61419	769.98513	63.53%	484.97%	94.70%
40	616.40151	-461.64074	770.10583	63.57%	484.99%	94.73%
41	616.15012	-461.28592	769.69193	63.50%	484.69%	94.63%
42	616.27302	-461.61636	769.98837	63.53%	484.97%	94.70%
43	616.40916	-461.68369	770.13771	63.57%	485.03%	94.74%
44	420.25019	-297.08805	514.65672	11.52%	347.76%	30.14%
45	516.46379	-341.80811	619.32837	37.05%	385.05%	56.61%
46	420.15598	-297.01652	514.53849	11.49%	347.70%	30.11%
47	516.39300	-341.67100	619.19367	37.03%	384.94%	56.57%
48	420.25873	-297.14383	514.69589	11.52%	347.81%	30.15%
49	516.32632	-341.70101	619.15462	37.01%	384.96%	56.56%
50	420.20759	-297.03892	514.59356	11.51%	347.72%	30.12%
51	516.47887	-341.79331	619.33278	37.05%	385.04%	56.61%
52	420.15840	-297.01805	514.54135	11.49%	347.70%	30.11%
53	516.37771	-341.68399	619.18809	37.02%	384.95%	56.57%
54	420.30211	-297.19400	514.76027	11.53%	347.85%	30.17%
55	516.50040	-341.69090	619.29422	37.06%	384.96%	56.60%
56	-340.52631	289.22456	446.77625	190.36%	141.20%	12.97%
57	-340.59590	289.22736	446.83111	190.38%	141.20%	12.99%
58	-340.62333	289.13732	446.79374	190.39%	141.13%	12.98%
59	-340.58580	289.26448	446.84743	190.38%	141.23%	12.99%
60	-340.59377	289.22611	446.82866	190.38%	141.20%	12.99%
61	-340.56335	289.09692	446.72186	190.37%	141.09%	12.96%
62	-582.50605	43.85334	584.15444	254.57%	63.43%	47.71%
63	-555.58475	79.37150	561.22566	247.43%	33.81%	41.91%
64	-582.41315	43.93561	584.06799	254.55%	63.36%	47.69%
65	-555.46117	79.67964	561.14700	247.40%	33.55%	41.89%
66	-582.50700	43.90828	584.15951	254.57%	63.38%	47.71%
67	-555.73549	79.45558	561.38678	247.47%	33.74%	41.96%
68	-582.55026	43.88950	584.20124	254.58%	63.40%	47.72%
69	-555.60057	79.39040	561.24400	247.43%	33.79%	41.92%
70	-582.41127	43.93479	584.06605	254.55%	63.36%	47.69%
71	-555.44224	79.65968	561.12543	247.39%	33.57%	41.89%
72	-582.46166	43.87185	584.11157	254.56%	63.41%	47.70%
73	-555.66778	79.41868	561.31454	247.45%	33.77%	41.94%
74	-473.05993	-519.07673	702.30075	225.53%	532.89%	77.59%
75	-472.83633	-518.93062	702.04215	225.47%	532.77%	77.52%
76	-472.85745	-518.92592	702.05290	225.48%	532.76%	77.52%
77	-473.08023	-519.05761	702.30029	225.54%	532.87%	77.59%
78	-472.83527	-518.93092	702.04166	225.47%	532.77%	77.52%
79	-472.83624	-518.94530	702.05294	225.47%	532.78%	77.52%
80	-427.98573	-737.62997	852.80112	213.57%	715.15%	115.64%
			Rata-rata:	120.57%	308.87%	60.37%

	P Hasil SD Iterasi 4			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	-1105.06582	-1250.62521	1668.90200	393.24%	1142.97%	322.01%
2	-921.72998	-761.00369	1195.28774	344.59%	734.65%	202.25%
3	-921.68500	-760.78206	1195.11196	344.58%	734.46%	202.20%
4	-921.65995	-760.94537	1195.19661	344.57%	734.60%	202.22%
5	-921.74466	-761.00038	1195.29695	344.59%	734.64%	202.25%
6	-921.68554	-760.78116	1195.11179	344.58%	734.46%	202.20%
7	-921.64580	-760.94778	1195.18723	344.57%	734.60%	202.22%
8	-565.66914	205.63997	601.88817	250.10%	71.50%	52.20%
9	-437.24683	205.92224	483.31021	216.03%	71.73%	22.21%
10	-565.57656	205.73517	601.83370	250.08%	71.57%	52.18%
11	-437.04714	205.89597	483.11837	215.97%	71.71%	22.16%
12	-565.62833	205.44753	601.78409	250.09%	71.33%	52.17%
13	-437.20852	205.75241	483.20321	216.02%	71.59%	22.19%
14	-565.68357	205.63147	601.89883	250.11%	71.49%	52.20%
15	-437.26927	205.91290	483.32653	216.03%	71.72%	22.22%
16	-565.57756	205.73621	601.83499	250.08%	71.58%	52.18%
17	-437.02634	205.90698	483.10424	215.97%	71.72%	22.16%
18	-565.61483	205.45657	601.77450	250.09%	71.34%	52.17%
19	-437.19963	205.75456	483.19608	216.01%	71.59%	22.18%
20	-51.74616	266.53591	271.51253	113.73%	122.28%	31.34%
21	-51.90582	266.49034	271.49828	113.77%	122.24%	31.35%
22	-51.86836	266.30765	271.31180	113.76%	122.09%	31.39%
23	-51.72604	266.51222	271.48545	113.73%	122.26%	31.35%
24	-51.90698	266.48822	271.49642	113.77%	122.24%	31.35%
25	-51.89094	266.33342	271.34141	113.77%	122.11%	31.39%
26	-5.56913	127.48812	127.60970	101.48%	6.32%	67.73%
27	85.09064	-242.40733	256.90802	77.42%	302.16%	35.04%
28	-5.73414	-127.76540	127.89401	101.52%	206.55%	67.66%
29	85.30578	-242.44182	257.01189	77.36%	302.19%	35.01%
30	-5.72738	-127.72418	127.85253	101.52%	206.52%	67.67%
31	85.35651	-242.12674	256.73156	77.35%	301.92%	35.08%
32	-5.51022	-127.49725	127.61627	101.46%	206.33%	67.73%
33	85.08884	-242.45773	256.95498	77.42%	302.20%	35.02%
34	-5.73565	-127.76826	127.89694	101.52%	206.55%	67.66%
35	85.30580	-242.39516	256.96789	77.36%	302.15%	35.02%
36	-5.78775	-127.71575	127.84683	101.54%	206.51%	67.67%
37	85.29737	-242.16249	256.74562	77.37%	301.95%	35.08%
38	12.46320	-253.79990	254.10572	96.69%	311.66%	35.75%
39	12.47822	-253.98030	254.28665	96.69%	311.81%	35.70%
40	12.54630	-254.09017	254.39973	96.67%	311.90%	35.67%
41	12.51167	-253.77328	254.08152	96.68%	311.64%	35.75%
42	12.47821	-253.98503	254.29137	96.69%	311.81%	35.70%
43	12.49830	-254.11741	254.42458	96.68%	311.92%	35.66%
44	195.30565	-172.19299	260.37420	48.17%	243.60%	34.16%
45	318.14090	-182.74603	366.89201	15.58%	252.40%	7.23%
46	195.26217	-172.13464	260.30300	48.19%	243.55%	34.18%
47	318.19773	-182.63674	366.88687	15.56%	252.31%	7.23%

48	195.32166	-172.33620	260.48093	48.17%	243.72%	34.13%
49	318.06864	-182.58743	366.75036	15.60%	252.27%	7.26%
50	195.31983	-172.13853	260.34882	48.17%	243.56%	34.17%
51	318.16417	-182.75821	366.91825	15.57%	252.41%	7.22%
52	195.26384	-172.13874	260.30696	48.19%	243.56%	34.18%
53	318.17653	-182.62681	366.86354	15.57%	252.30%	7.23%
54	195.30803	-172.39109	260.50704	48.17%	243.77%	34.13%
55	318.20599	-182.64187	366.89659	15.56%	252.32%	7.22%
56	-205.18600	464.07819	507.41488	154.45%	287.02%	28.31%
57	-205.18004	464.03736	507.37512	154.45%	286.99%	28.30%
58	-205.20916	463.91139	507.27170	154.45%	286.88%	28.27%
59	-205.20586	464.12893	507.46932	154.45%	287.06%	28.32%
60	-205.17707	464.03450	507.37131	154.45%	286.99%	28.30%
61	-205.18806	463.86152	507.21756	154.45%	286.84%	28.26%
62	-405.58500	42.44867	407.80030	207.63%	64.60%	3.12%
63	-361.02119	106.12996	376.29758	195.80%	11.49%	4.85%
64	-405.41623	42.46681	407.63433	207.58%	64.58%	3.08%
65	-360.82044	106.43254	376.19048	195.75%	11.24%	4.87%
66	-405.51098	42.46070	407.72793	207.61%	64.59%	3.10%
67	-361.13950	106.27038	376.45070	195.83%	11.37%	4.81%
68	-405.59736	42.49248	407.81715	207.63%	64.56%	3.12%
69	-361.02011	106.14597	376.30106	195.80%	11.48%	4.85%
70	-405.41281	42.46514	407.63076	207.58%	64.59%	3.08%
71	-360.81534	106.41485	376.18058	195.75%	11.25%	4.88%
72	-405.49592	42.41723	407.70842	207.60%	64.63%	3.10%
73	-361.10651	106.21583	376.40365	195.82%	11.42%	4.82%
74	-416.30744	-779.63453	883.82231	210.47%	750.18%	123.49%
75	-416.05308	-779.51348	883.59574	210.40%	750.08%	123.43%
76	-416.06838	-779.50456	883.59508	210.41%	750.07%	123.43%
77	-416.31029	-779.61374	883.80532	210.47%	750.17%	123.48%
78	-416.05063	-779.51403	883.59508	210.40%	750.08%	123.43%
79	-416.06330	-779.52563	883.61127	210.41%	750.09%	123.43%
80	-451.13247	-1082.15599	1172.42573	219.71%	1002.47%	196.47%
			Rata-rata:	160.06%	281.51%	55.04%

	P Hasil SD Iterasi 5			Error		
Node	Real	Imajiner	Magnituda	Real	Imajiner	Magnituda
1	-1795.73723	-612.55253	1897.33834	576.51%	610.84%	379.77%
2	-1057.35201	-494.11954	1167.11070	380.58%	512.08%	195.12%
3	-1057.30729	-493.73831	1166.90883	380.56%	511.76%	195.07%
4	-1057.40540	-493.91244	1167.07141	380.59%	511.90%	195.11%
5	-1057.32624	-494.05892	1167.06169	380.57%	512.02%	195.11%
6	-1057.30482	-493.73829	1166.90659	380.56%	511.76%	195.07%
7	-1057.42844	-493.97289	1167.11786	380.60%	511.95%	195.12%
8	80.07479	-144.57994	165.27350	78.75%	220.57%	58.21%
9	275.49766	-179.75691	328.95518	26.89%	249.91%	16.82%
10	80.27568	-144.40351	165.21670	78.70%	220.43%	58.22%
11	275.43236	-179.70535	328.87231	26.91%	249.87%	16.84%
12	79.86587	-144.70183	165.27908	78.81%	220.68%	58.21%
13	275.29794	-179.91522	328.87451	26.95%	250.04%	16.84%
14	80.08530	-144.52406	165.22971	78.75%	220.53%	58.22%

15	275.47257	-179.69293	328.89920	26.90%	249.86%	16.83%
16	80.27669	-144.40326	165.21698	78.70%	220.43%	58.22%
17	275.46093	-179.76886	328.93095	26.90%	249.92%	16.82%
18	79.85802	-144.75732	165.32388	78.81%	220.72%	58.20%
19	275.25939	-179.96262	328.86818	26.96%	250.08%	16.84%
20	763.42615	-452.53042	887.47015	102.58%	477.39%	124.41%
21	763.23580	-452.44638	887.26356	102.53%	477.32%	124.36%
22	762.91120	-452.56745	887.04610	102.44%	477.42%	124.30%
23	763.43216	-452.54754	887.48405	102.58%	477.41%	124.41%
24	763.22411	-452.44066	887.25058	102.53%	477.32%	124.36%
25	762.91388	-452.55218	887.04062	102.44%	477.41%	124.30%
26	235.60585	-387.47603	453.48406	37.48%	423.14%	14.67%
27	294.13017	-525.01712	601.79360	21.95%	537.84%	52.17%
28	235.25843	-387.56581	453.38039	37.57%	423.21%	14.64%
29	294.27326	-525.17922	602.00495	21.91%	537.98%	52.23%
30	235.00231	-387.43075	453.13207	37.64%	423.10%	14.58%
31	294.50889	-524.89337	601.87087	21.85%	537.74%	52.19%
32	235.66018	-387.54128	453.56803	37.47%	423.19%	14.69%
33	294.02027	-524.99627	601.72170	21.98%	537.83%	52.15%
34	235.24830	-387.56904	453.37791	37.58%	423.22%	14.64%
35	294.37251	-525.20400	602.07509	21.89%	538.00%	52.24%
36	234.94794	-387.36257	453.04558	37.65%	423.04%	14.56%
37	294.36912	-524.82584	601.74358	21.89%	537.68%	52.16%
38	-160.52051	-120.39944	200.65607	142.60%	200.41%	49.26%
39	-160.58825	-120.25091	200.62121	142.61%	200.28%	49.27%
40	-160.70981	-120.39530	200.80506	142.65%	200.40%	49.22%
41	-160.42869	-120.41260	200.59052	142.57%	200.42%	49.28%
42	-160.59920	-120.25834	200.63442	142.62%	200.29%	49.27%
43	-160.79801	-120.38382	200.86877	142.67%	200.40%	49.21%
44	115.78958	-216.07074	245.14035	69.27%	280.19%	38.01%
45	309.26570	-193.53312	364.82920	17.93%	261.40%	7.75%
46	115.80024	-215.95067	245.03957	69.27%	280.09%	38.04%
47	309.52843	-193.58290	365.07834	17.86%	261.44%	7.68%
48	115.73177	-216.27553	245.29359	69.29%	280.36%	37.97%
49	309.37863	-193.32117	364.81257	17.90%	261.22%	7.75%
50	115.88187	-216.00881	245.12938	69.25%	280.14%	38.02%
51	309.25583	-193.53973	364.82434	17.94%	261.40%	7.75%
52	115.79559	-215.96012	245.04570	69.27%	280.10%	38.04%
53	309.53804	-193.58746	365.08890	17.86%	261.44%	7.68%
54	115.64339	-216.33809	245.30708	69.31%	280.42%	37.97%
55	309.45667	-193.48551	364.96586	17.88%	261.36%	7.71%
56	-220.10484	691.03654	725.24316	158.41%	476.30%	83.39%
57	-220.05951	690.86927	725.07002	158.39%	476.16%	83.35%
58	-220.03137	690.69657	724.89693	158.39%	476.01%	83.30%
59	-220.06517	691.13671	725.32657	158.40%	476.38%	83.41%
60	-220.05611	690.86077	725.06089	158.39%	476.15%	83.34%
61	-220.06401	690.59846	724.81336	158.40%	475.93%	83.28%
62	-668.28413	146.39716	684.13143	277.33%	22.09%	72.99%
63	-591.35388	256.55461	644.60816	256.92%	113.96%	63.00%
64	-668.00962	146.27597	683.83734	277.26%	21.99%	72.92%
65	-591.02218	256.81957	644.40942	256.83%	114.18%	62.95%

66	-668.08282	146.29041	683.91194	277.28%	22.00%	72.94%
67	-591.39504	256.80078	644.74393	256.93%	114.16%	63.03%
68	-668.24312	146.48016	684.10913	277.32%	22.16%	72.99%
69	-591.33139	256.58284	644.59876	256.91%	113.98%	63.00%
70	-668.00243	146.26900	683.82883	277.26%	21.98%	72.92%
71	-591.02987	256.78189	644.40147	256.83%	114.15%	62.95%
72	-668.11495	146.20579	683.92523	277.29%	21.93%	72.94%
73	-591.42434	256.68324	644.72400	256.94%	114.06%	63.03%
74	-1092.88148	-1007.61954	1486.50162	390.00%	940.31%	275.88%
75	-1092.55056	-1007.57275	1486.22662	389.92%	940.27%	275.82%
76	-1092.55796	-1007.55439	1486.21962	389.92%	940.26%	275.81%
77	-1092.85378	-1007.58406	1486.45721	390.00%	940.28%	275.87%
78	-1092.54435	-1007.57674	1486.22476	389.91%	940.28%	275.81%
79	-1092.57945	-1007.59289	1486.26151	389.92%	940.29%	275.82%
80	-1371.75534	-1383.42866	1948.22678	464.01%	1253.72%	392.64%
			Rata-rata:	160.05%	376.95%	88.51%