

Untuk S1

- Uji Normal

- Uji Seragam

$$\sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

$$= \sqrt{\frac{(3-2.639)^2 + (1-2.639)^2 + \dots + (2.5-2.639)^2}{36-1}}$$

$$= 0.752$$

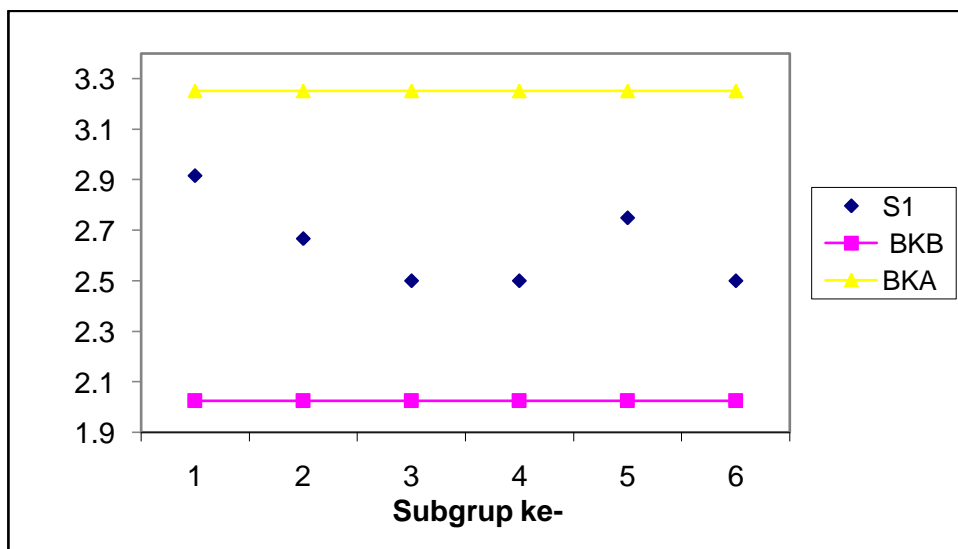
$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{0.752}{\sqrt{6}} = 0.307$$

$$BKB = \bar{x} - c(\sigma_{\bar{x}}) = 2.639 - 2(0.307) = 2.025$$

$$BKA = \bar{x} + c(\sigma_{\bar{x}}) = 2.639 + 2(0.307) = 3.253$$

Tabel dibawah ini adalah tabel keseragaman pada S1

Sub grup ke-	Data ke-						Jarak rata-rata
	1	2	3	4	5	6	
1	2.5	2.5	4	3	3	2.5	2.917
2	1	3	3	3.5	2.5	3	2.667
3	3.5	1	2	3	2	3.5	2.500
4	3	3	3.5	1	2.5	2	2.500
5	4	2	2.5	2.5	2.5	3	2.750
6	3	3.5	2	2	2	2.5	2.500



Kesimpulan : Data seragam

- Uji Cukup

$$\begin{aligned}
 N &= \left[\frac{\left(\frac{c}{\alpha}\right) \sqrt{N \sum X_i^2 - (\sum X_i)^2}}{\sqrt{X_i}} \right]^2 \\
 &= \left[\frac{2 \sqrt{36(2.5^2 + 1^2 + \dots + 2.5^2) - (2.5 + 1 + \dots + 2.5)^2}}{0.1 \cdot 2.5 + 1 + \dots + 2.5} \right]^2 \\
 &= \left[20 \frac{\sqrt{36(270.5) - 9025}}{95} \right]^2 = 31.60111 \approx 32
 \end{aligned}$$

Karena $N' < N$

$$32 < 36$$

Maka data cukup

Untuk S2

- Uji Normal

- Uji Seragam

$$\sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

$$= \sqrt{\frac{(13-11.667)^2 + (8-11.667)^2 + \dots + (11-11.667)^2}{36-1}}$$

$$= 2.995$$

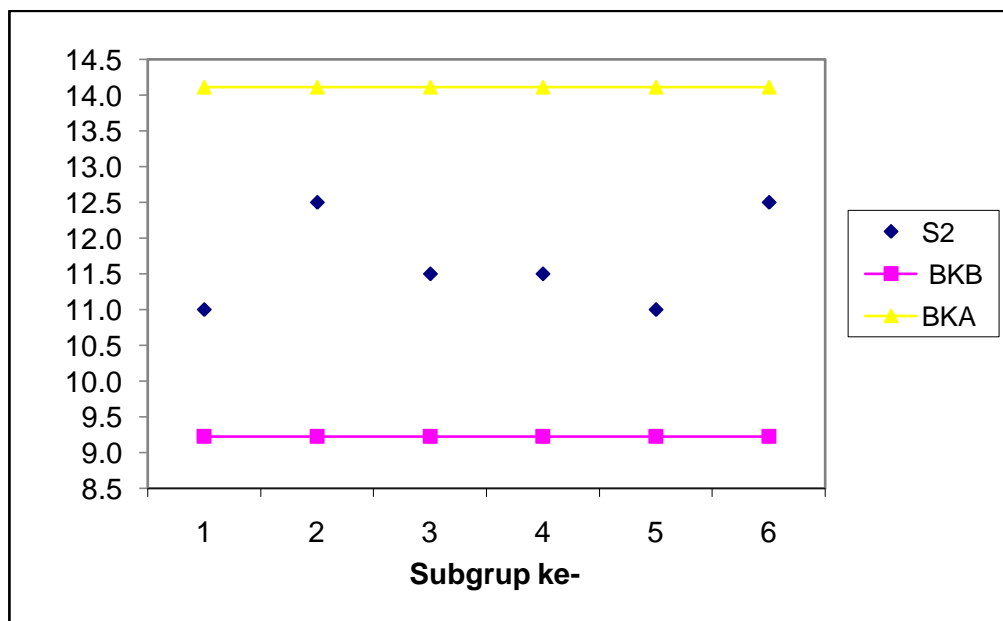
$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{2.995}{\sqrt{6}} = 1.223$$

$$BKB = \bar{x} - c(\sigma_{\bar{x}}) = 11.667 - 2(1.223) = 9.221$$

$$BKA = \bar{x} + c(\sigma_{\bar{x}}) = 11.667 + 2(1.223) = 14.113$$

Tabel dibawah ini adalah tabel keseragaman pada S2

Sub grup ke-	Data ke-						Jarak rata-rata
	1	2	3	4	5	6	
1	13	9	14	7	11	12	11.000
2	8	9	9	12	19	18	12.500
3	9	8	12	13	13	14	11.500
4	12	10	11	7	13	16	11.500
5	11	16	8	8	9	14	11.000
6	14	10	12	13	15	11	12.500



Kesimpulan : Data seragam

- Uji Cukup

$$\begin{aligned}
 N &= \left[\frac{\left(\frac{c}{\alpha}\right) \sqrt{N \sum X_i^2 - (\sum X_i)^2}}{\sqrt{X_i}} \right]^2 \\
 &= \left[\frac{2 \sqrt{36(13^2 + 8^2 + \dots + 11^2) - (13 + 8 + \dots + 11)^2}}{0.1 \cdot 13 + 8 + \dots + 11} \right]^2 \\
 &= \left[20 \frac{\sqrt{36(5214) - 176400}}{420} \right]^2 = 25.63265 \approx 26
 \end{aligned}$$

Karena $N' < N$

$$26 < 36$$

Maka data cukup

Untuk S3

- Uji Normal

- Uji Seragam

$$\sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

$$= \sqrt{\frac{(8-9.833)^2 + (6-9.833)^2 + \dots + (11-9.833)^2}{36-1}}$$

$$= 2.547$$

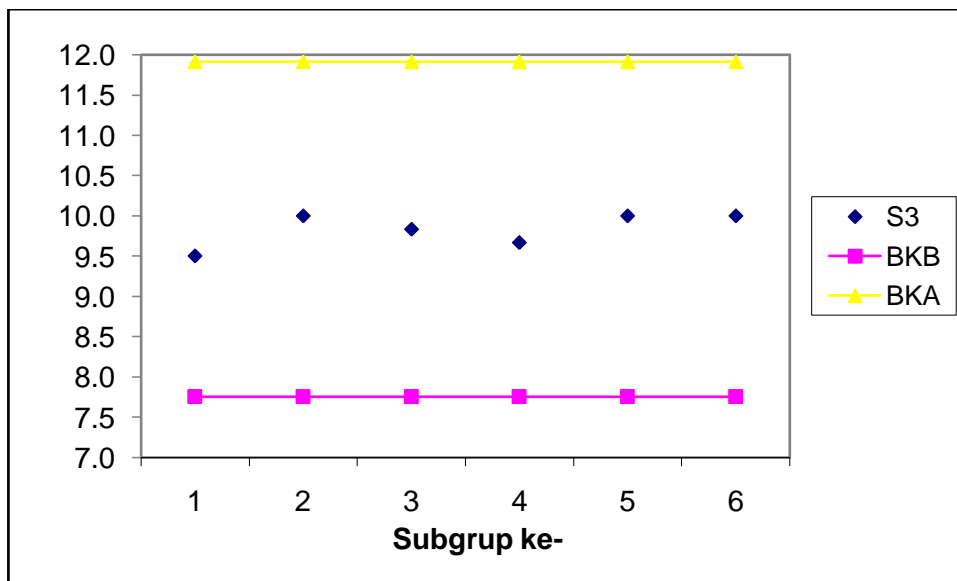
$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{2.547}{\sqrt{6}} = 1.04$$

$$BKB = \bar{x} - c(\sigma_{\bar{x}}) = 9.833 - 2(1.04) = 7.753$$

$$BKA = \bar{x} + c(\sigma_{\bar{x}}) = 9.833 + 2(1.04) = 11.913$$

Tabel dibawah ini adalah tabel keseragaman pada S3

Sub grup ke-	Data ke-						Jarak rata-rata
	1	2	3	4	5	6	
1	12	9	9	10	8	9	9.500
2	11	6	13	14	8	8	10.00
3	9	12	8	9	9	12	9.833
4	10	10	11	8	11	8	9.667
5	8	8	9	19	7	9	10.000
6	6	9	12	14	8	11	10.000



Kesimpulan : Data seragam

- Uji Cukup

$$\begin{aligned}
 N &= \left[\frac{\left(\frac{c}{\alpha}\right) \sqrt{N \sum X_i^2 - (\sum X_i)^2}}{\sqrt{X_i}} \right]^2 \\
 &= \left[\frac{2 \sqrt{36(12^2 + 6^2 + \dots + 11^2) - (12 + 6 + \dots + 11)^2}}{0.1 \cdot 8 + 6 + \dots + 11} \right]^2 \\
 &= \left[20 \frac{\sqrt{36(3708) - 125316}}{354} \right]^2 = 26.08446 \approx 27
 \end{aligned}$$

Karena $N' < N$

$$27 < 36$$

Maka data cukup

Untuk S4

- Uji Normal

- Uji Seragam

$$\sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

$$= \sqrt{\frac{(2.5 - 3.389)^2 + (3 - 3.389)^2 + \dots + (4 - 3.389)^2}{36 - 1}}$$

$$= 1.015$$

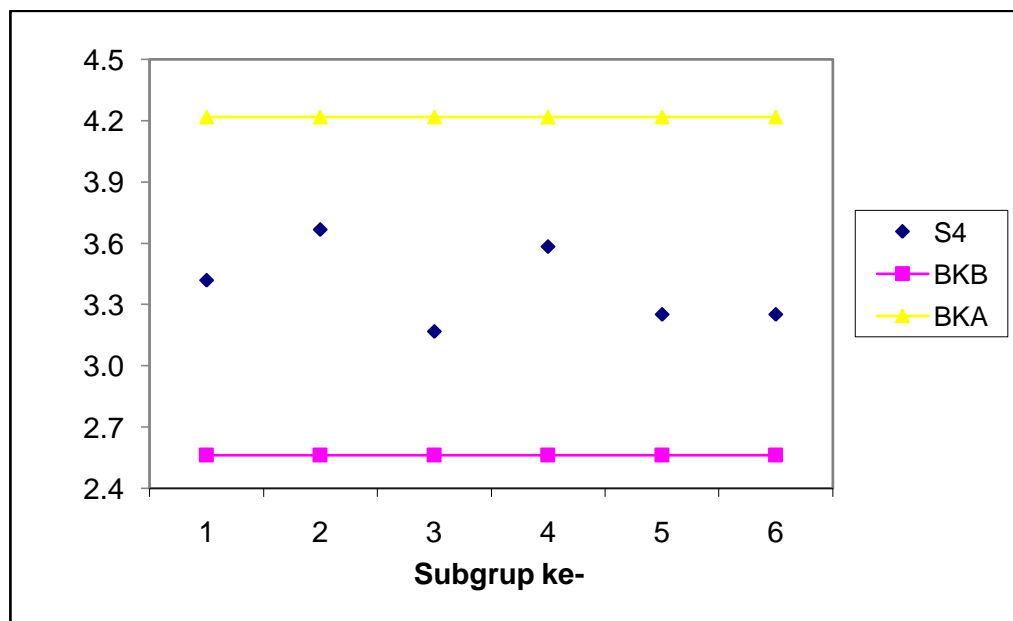
$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{1.015}{\sqrt{6}} = 0.414$$

$$BKB = \bar{x} - c(\sigma_{\bar{x}}) = 3.389 - 2(0.414) = 2.561$$

$$BKA = \bar{x} + c(\sigma_{\bar{x}}) = 3.389 + 2(0.414) = 4.217$$

Tabel dibawah ini adalah tabel keseragaman pada S34

Sub grup ke-	Data ke-						Jarak rata-rata
	1	2	3	4	5	6	
1	2.5	2.5	5	4.5	3	3	3.417
2	3	2.5	5	3	4.5	4	3.667
3	2	2	2.5	4.5	4	4	3.167
4	4.5	5	4	2	3	3	3.583
5	4.5	1	3	3	4	4	3.250
6	2.5	4	4	3	2	4	3.250



Kesimpulan : Data seragam

- Uji Cukup

$$\begin{aligned}
 N &= \left[\frac{\left(\frac{c}{\alpha}\right) \sqrt{N \sum X_i^2 - (\sum X_i)^2}}{\sqrt{X_i}} \right]^2 \\
 &= \left[\frac{2 \sqrt{36(2.5^2 + 3^2 + \dots + 4^2) - (2.5 + 3 + \dots + 4)^2}}{0.1 \cdot 2.5 + 3 + \dots + 4} \right]^2 \\
 &= \left[20 \frac{\sqrt{36(449.5) - 14884}}{122} \right]^2 = 34.8831 \approx 35
 \end{aligned}$$

Karena $N' < N$

$$35 < 36$$

Maka data cukup

Untuk β

- Uji Normal

- Uji Seragam

$$\sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

$$= \sqrt{\frac{(232 - 256.389)^2 + (290 - 256.389)^2 + \dots + (222 - 256.389)^2}{36-1}}$$

$$= 38.555$$

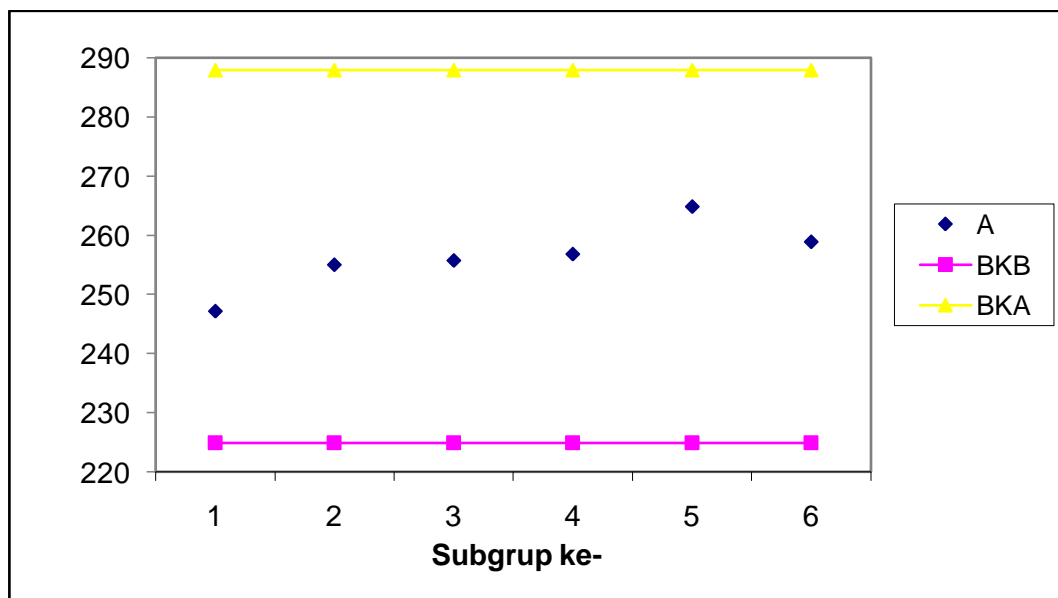
$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{38.555}{\sqrt{6}} = 15.74$$

$$BKB = \bar{x} - c(\sigma_{\bar{x}}) = 256.389 - 2(15.74) = 224.909$$

$$BKA = \bar{x} + c(\sigma_{\bar{x}}) = 256.389 + 2(15.74) = 287.869$$

Tabel dibawah ini adalah tabel keseragaman pada Beta

Sub grup ke-	Data ke-						Jarak rata-rata
	1	2	3	4	5	6	
1	232	247	215	228	249	312	247.167
2	290	190	320	250	259	221	255.000
3	228	235	310	228	257	276	255.667
4	242	221	234	258	255	331	256.833
5	225	270	245	295	265	289	264.833
6	165	260	278	288	340	222	258.833



Kesimpulan : Data seragam

- Uji Cukup

$$\begin{aligned}
 N &= \left[\frac{\left(\frac{c}{\alpha}\right) \sqrt{N \sum X_i^2 - (\sum X_i)^2}}{\sqrt{X_i}} \right]^2 \\
 &= \left[\frac{2 \sqrt{36(232^2 + 290^2 + \dots + 222^2) - (232 + 290 + \dots + 222)^2}}{0.1 \cdot 232 + 290 + \dots + 222} \right]^2 \\
 &= \left[20 \frac{\sqrt{36(2418496) - 85192900}}{9230} \right]^2 = 8.79 \approx 9
 \end{aligned}$$

Karena $N' < N$

$$9 < 36$$

Maka data cukup

Untuk Y

- Uji Normal

- Uji Seragam

$$\sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

$$= \sqrt{\frac{(92 - 117.222)^2 + (125 - 117.222)^2 + \dots + (88 - 117.222)^2}{36 - 1}}$$

$$= 33.573$$

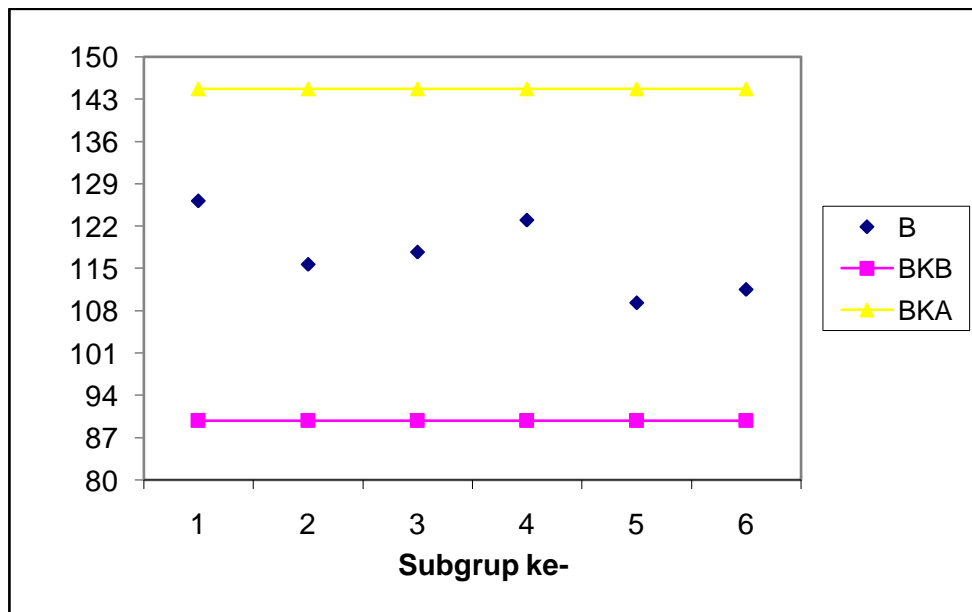
$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{33.573}{\sqrt{6}} = 13.706$$

$$BKB = \bar{x} - c(\sigma_{\bar{x}}) = 117.222 - 2(13.706) = 89.81$$

$$BKA = \bar{x} + c(\sigma_{\bar{x}}) = 117.222 + 2(13.706) = 144.634$$

Tabel dibawah ini adalah tabel keseragaman pada Y

Sub grup ke-	Data ke-						Jarak rata-rata
	1	2	3	4	5	6	
1	60	185	120	122	115	155	126.167
2	119	80	160	110	105	120	115.667
3	113	160	90	123	76	144	117.667
4	92	120	100	220	85	121	123.000
5	103	90	145	120	99	99	109.333
6	113	180	115	88	85	88	111.500



Kesimpulan : Data seragam

- Uji Cukup

$$\begin{aligned}
 N &= \left[\frac{\left(\frac{c}{\alpha}\right) \sqrt{N \sum X_i^2 - (\sum X_i)^2}}{\sqrt{X_i}} \right]^2 \\
 &= \left[\frac{2 \sqrt{36(92^2 + 125^2 + \dots + 88^2) - (92 + 125 + \dots + 88)^2}}{0.1 \cdot 92 + 125 + \dots + 88} \right]^2 \\
 &= \left[20 \frac{\sqrt{36(534128) - 17808400}}{4220} \right]^2 = 31.89973 \approx 32
 \end{aligned}$$

Karena $N' < N$

$$32 < 36$$

Maka data cukup

KOMENTAR DOSEN PENGUJI

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Judul Tugas Akhir : Perancangan Ulang Jok Mobil “X” dilihat dari segi Ergonomi.

Komentar-komentar Dosen Penguji :

- Analisis Sandaran Tangan
- Lampiran 1 tidak perlu dilampirkan
- Beri keterangan sesudah gambar

DATA PENULIS

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