Kuisioner keadaan perusahaan

Tabel 4.2 kuisioner performance man power

No	**Performance man power**	SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Karyawan mengetahui bahwa kualitas dapat meningkatkan kualitas					
2	Karyawan biasanya dengan cepat memperbaiki prestasi kerjanya yang buruk					
3	Karyawan meningkatkan kualitas karena perintah dari pemimpin					
4	Perusahaan meminta pendapat karyawan dalam usaha memperbaiki kualitas					
5	Karyawan memiliki sikap kreatif dan inovatif					

Tabel 4.3 kuisioner performance mesin

No	**Performance man power**	Jawaban				
		SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Mesin berteknologi modern dengan system otomasi					
2	Mesin yang berteknologi modern dapat mempengaruhi kualitas dan kuantiti produknya					
3	Untuk pengoperasian mesin karyawan harus sesuai dengan standar operation					
4	Preventife maintenance dilakukan sesuai jadwal perawatannya					
5	Mesin pada saat operation jarang mengalami trouble					

Tabel 4.4 kuisioner performance supply bahan baku

No	**Performance supply bahan baku**	SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Material maupun supply bahan baku sesuai spesifikasi kualitasnya					
2	Supplay bahan baku ke produksi sesuai work instruksi					

Tabel Hasil Kuisioner Man power

NO	1	2	3	4	5
1	5	4	4	3	5
2	4	4	4	4	5
3	5	4	4	4	4
4	5	4	4	3	5
5	4	5	3	4	5
6	5	5	3	4	4
7	4	5	4	5	5
8	4	5	5	4	4
9	5	4	3	5	5
10	5	4	3	4	5
11	5	5	3	4	4
12	5	4	5	3	5
13	5	5	3	4	4
14	5	4	4	3	5
15	5	5	4	4	4
16	5	4	4	3	5
17	4	5	5	4	5
18	4	5	4	3	5
19	4	4	5	5	4
20	5	4	4	3	5
21	4	5	3	5	4
22	4	4	5	4	4
23	4	4	5	3	5
24	5	5	4	4	4
25	5	4	4	3	5
26	4	4	5	4	5
27	4	5	4	4	4
28	4	5	3	5	5
29	5	5	4	3	4
30	4	4	4	4	5

Tabel Hasil Uji Validitas pada pertanyaan 1 dalam kuisioner Man power

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	4	21	16	441	84
3	5	21	25	441	105
4	5	21	25	441	105
5	4	21	16	441	84
6	5	21	25	441	105
7	4	23	16	529	92
8	4	22	16	484	88
9	5	22	25	484	110
10	5	21	25	441	105
11	5	21	25	441	105
12	5	22	25	484	110
13	5	21	25	441	105
14	5	21	25	441	105
15	5	22	25	484	110
16	5	21	25	441	105
17	4	23	16	529	92
18	4	21	16	441	84
19	4	22	16	484	88
20	5	21	25	441	105
21	4	21	16	441	84
22	4	21	16	441	84
23	4	21	16	441	84
24	5	22	25	484	110
25	5	21	25	441	105
26	4	22	16	484	88
27	4	21	16	441	84
28	4	22	16	484	88
29	5	21	25	441	105
30	4	21	16	441	84
$\sum$	136	642	624	13750	2908

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2908) - (136)(642)}{\sqrt{[30(624) - (136)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{72}}{\mathbf{274,34}}$$

$$= \mathbf{0,4624}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2 = \frac{\sum x_i^2 - \frac{(\sum x_i)^2}{n}}{n}}$$

$$= \frac{\mathbf{624 - \frac{(136)^2}{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2489}$$

Tabel Hasil Uji Validitas pada pertanyaan 2 dalam kuisioner Performance man power

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	4	21	16	441	84
3	4	21	16	441	84
4	4	21	16	441	84
5	5	21	25	441	105
6	5	21	25	441	105
7	5	23	25	529	115
8	5	22	25	484	110
9	4	22	16	484	88
10	4	21	16	441	84
11	5	21	25	441	105
12	4	22	16	484	88
13	5	21	25	441	105
14	4	21	16	441	84
15	5	22	25	484	110
16	4	21	16	441	84
17	5	23	25	529	115
18	5	21	25	441	105
19	4	22	16	484	88
20	4	21	16	441	84
21	5	21	25	441	105
22	4	21	16	441	84
23	4	21	16	441	84
24	5	22	25	484	110
25	4	21	16	441	84
26	4	22	16	484	88
27	5	21	25	441	105
28	5	22	25	484	110
29	5	21	25	441	105
30	4	21	16	441	84
$\sum$	134	642	606	13750	2870

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2870) - (134)(642)}{\sqrt{[30(606) - (134)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{72}}{\mathbf{274,34}}$$

$$= \mathbf{0,4624}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{606} - \frac{(\mathbf{134})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2489}$$

Tabel Hasil Uji Validitas pada pertanyaan 3 dalam kuisioner Performance man power

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	4	21	16	441	84
3	4	21	16	441	84
4	4	21	16	441	84
5	3	21	9	441	63
6	3	21	9	441	63
7	4	23	16	529	92
8	5	22	25	484	110
9	3	22	9	484	66
10	3	21	9	441	63
11	3	21	9	441	63
12	5	22	25	484	110
13	3	21	9	441	63
14	4	21	16	441	84
15	4	22	16	484	88
16	4	21	16	441	84
17	5	23	25	529	115
18	4	21	16	441	84
19	5	22	25	484	110
20	4	21	16	441	84
21	3	21	9	441	63
22	5	21	25	441	105
23	5	21	25	441	105
24	4	22	16	484	88
25	4	21	16	441	84
26	5	22	25	484	110
27	4	21	16	441	84
28	3	22	9	484	66
29	4	21	16	441	84
30	4	21	16	441	84
∑	119	642	487	13750	2551

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2551) - (119)(642)}{\sqrt{[30(487) - (119)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{132}}{\mathbf{388,41}}$$

$$= \mathbf{0,5398}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{487} - \frac{(\mathbf{119})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,4989}$$

Tabel Hasil Uji Validitas pada pertanyaan 4 dalam kuisioner Man power

NO	X	Y	X^2	Y^2	XY
1	3	21	9	441	63
2	4	21	16	441	84
3	4	21	16	441	84
4	3	21	9	441	63
5	4	21	16	441	84
6	4	21	16	441	84
7	5	23	25	529	115
8	4	22	16	484	88
9	5	22	25	484	110
10	4	21	16	441	84
11	4	21	16	441	84
12	3	22	9	484	66
13	4	21	16	441	84
14	3	21	9	441	63
15	4	22	16	484	88
16	3	21	9	441	63
17	4	23	16	529	92
18	3	21	9	441	63
19	5	22	25	484	110
20	3	21	9	441	63
21	5	21	25	441	105
22	4	21	16	441	84
23	3	21	9	441	63
24	4	22	16	484	88
25	3	21	9	441	63
26	4	22	16	484	88
27	4	21	16	441	84
28	5	22	25	484	110
29	3	21	9	441	63
30	4	21	16	441	84
$\sum$	115	642	455	13750	2467

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2467) - (115)(642)}{\sqrt{[30(455) - (115)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{180}}{\mathbf{377,88}}$$

$$= \mathbf{0,4763}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{455} - \frac{(\mathbf{115})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,4722}$$

Tabel Hasil Uji Validitas pada pertanyaan 5 dalam kuisioner Performance man power

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	5	21	25	441	105
3	4	21	16	441	84
4	5	21	25	441	105
5	5	21	25	441	105
6	4	21	16	441	84
7	5	23	25	529	115
8	4	22	16	484	88
9	5	22	25	484	110
10	5	21	25	441	105
11	4	21	16	441	84
12	5	22	25	484	110
13	4	21	16	441	84
14	5	21	25	441	105
15	4	22	16	484	88
16	5	21	25	441	105
17	5	23	25	529	115
18	5	21	25	441	105
19	4	22	16	484	88
20	5	21	25	441	105
21	4	21	16	441	84
22	4	21	16	441	84
23	5	21	25	441	105
24	4	22	16	484	88
25	5	21	25	441	105
26	5	22	25	484	110
27	4	21	16	441	84
28	5	22	25	484	110
29	4	21	16	441	84
30	5	21	25	441	105
$\sum$	138	642	642	13750	2954

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2954) - (138)(642)}{\sqrt{[30(642) - (138)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{24}}{\mathbf{269,39}}$$

$$= \mathbf{0,5890}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{642} - \frac{\mathbf{(138)^2}}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,24}$$

Tabel hasil pengolahan data kuisioner performance man power

NO	1	2	3	4	5	∑	∑²
1	5	4	4	3	5	21	441
2	5	4	4	4	5	21	441
3	5	4	4	4	4	21	441
4	5	4	4	3	5	21	441
5	5	5	3	4	5	21	441
6	5	5	3	4	4	21	441
7	5	5	4	5	5	23	529
8	5	5	5	4	4	22	484
9	5	4	3	5	5	22	484
10	5	4	3	4	5	21	441
11	5	5	3	4	4	21	441
12	5	4	5	3	5	22	484
13	5	5	3	4	4	21	441
14	5	4	4	3	5	21	441
15	5	5	4	4	4	22	484
16	5	4	4	3	5	21	441
17	5	5	5	4	5	23	529
18	5	5	4	3	5	21	441
19	5	4	5	5	4	22	484
20	5	4	4	3	5	21	441
21	5	5	3	5	4	21	441
22	5	4	5	4	4	21	441
23	5	4	5	3	5	21	441
24	5	5	4	4	4	22	484
25	5	4	4	3	5	21	441
26	5	4	5	4	5	22	484
27	5	5	4	4	4	21	441
28	5	5	3	5	5	22	484
29	5	5	4	3	4	21	441
30	5	4	4	4	5	21	441
∑	150	134	119	115	138	642	13750

Tabel nilai reabilitas pada kuisioner Performance man power

variabel indicator	nilai realibilitas
Komandan Satuan	
1	0,2489
2	0,2489
3	0,4989
4	0,4722
5	0,24
∑	1,7089

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{13750} - \frac{(\mathbf{642})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,37}$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{5}{5-1}\right]\left[1 - \frac{1,7089}{0,37}\right]$$

$$= -4,86$$

Tabel Hasil Kuisioner Performance mesin

NO	1	2	3	4	5
1	4	5	5	4	3
2	4	5	4	5	3
3	4	4	4	5	3
4	5	4	5	4	4
5	4	5	4	5	3
6	4	4	4	4	4
7	5	4	4	4	3
8	5	4	4	5	3
9	4	4	4	5	3
10	4	5	5	5	4
11	4	5	4	5	4
12	4	4	4	4	5
13	4	4	4	5	3
14	4	5	4	4	3
15	5	4	5	4	4
16	5	4	5	4	3
17	4	5	4	5	4
18	4	4	4	4	4
19	5	4	5	4	3
20	5	4	4	4	4
21	5	4	5	5	4
22	4	5	4	5	4
23	4	4	5	4	4
24	4	4	5	4	4
25	5	4	4	4	3
26	4	4	5	5	4
27	4	5	4	4	4
28	4	5	4	4	3
29	5	4	4	4	3
30	5	4	4	4	3

Tabel Hasil Uji Validitas pada pertanyaan 1 dalam kuisioner Performance mesin

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	4	21	16	441	84
3	4	20	16	400	80
4	5	22	25	484	110
5	4	21	16	441	84
6	4	20	16	400	80
7	5	20	25	400	100
8	5	21	25	441	105
9	4	20	16	400	80
10	4	23	16	529	92
11	4	22	16	484	88
12	4	21	16	441	84
13	4	20	16	400	80
14	4	20	16	400	80
15	5	22	25	484	110
16	5	21	25	441	105
17	4	22	16	484	88
18	4	20	16	400	80
19	5	21	25	441	105
20	5	21	25	441	105
21	5	23	25	529	115
22	4	22	16	484	88
23	4	21	16	441	84
24	4	21	16	441	84
25	5	20	25	400	100
26	4	22	16	484	88
27	4	21	16	441	84
28	4	20	16	400	80
29	5	20	25	400	100
30	5	20	25	400	100
$\sum$	131	629	579	13213	2747

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2747) - (131)(629)}{\sqrt{[30(579) - (131)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{11}}{\mathbf{395,65}}$$

$$= \mathbf{0,4278}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{579} - \frac{(\mathbf{131})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2322}$$

Tabel Hasil Uji Validitas pada pertanyaan 2 dalam kuisioner Mesin

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	5	21	25	441	105
3	4	20	16	400	80
4	4	22	16	484	88
5	5	21	25	441	105
6	4	20	16	400	80
7	4	20	16	400	80
8	4	21	16	441	84
9	4	20	16	400	80
10	5	23	25	529	115
11	5	22	25	484	110
12	4	21	16	441	84
13	4	20	16	400	80
14	5	20	25	400	100
15	4	22	16	484	88
16	4	21	16	441	84
17	5	22	25	484	110
18	4	20	16	400	80
19	4	21	16	441	84
20	4	21	16	441	84
21	4	23	16	529	92
22	5	22	25	484	110
23	4	21	16	441	84
24	4	21	16	441	84
25	4	20	16	400	80
26	4	22	16	484	88
27	5	21	25	441	105
28	5	20	25	400	100
29	4	20	16	400	80
30	4	20	16	400	80
$\sum$	130	629	570	13213	2729

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2729) - (130)(629)}{\sqrt{[30(570) - (130)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{100}}{\mathbf{387,04}}$$

$$= \mathbf{0,5583}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{570} - \frac{(\mathbf{130})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2222}$$

Tabel Hasil Uji Validitas pada pertanyaan 3 dalam kuisioner Performance mesin

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	4	21	16	441	84
3	4	20	16	400	80
4	5	22	25	484	110
5	4	21	16	441	84
6	4	20	16	400	80
7	4	20	16	400	80
8	4	21	16	441	84
9	4	20	16	400	80
10	5	23	25	529	115
11	4	22	16	484	88
12	4	21	16	441	84
13	4	20	16	400	80
14	4	20	16	400	80
15	5	22	25	484	110
16	5	21	25	441	105
17	4	22	16	484	88
18	4	20	16	400	80
19	5	21	25	441	105
20	4	21	16	441	84
21	5	23	25	529	115
22	4	22	16	484	88
23	5	21	25	441	105
24	5	21	25	441	105
25	4	20	16	400	80
26	5	22	25	484	110
27	4	21	16	441	84
28	4	20	16	400	80
29	4	20	16	400	80
30	4	20	16	400	80
$\sum$	130	629	570	13213	2733

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2733) - (130)(629)}{\sqrt{[30(570) - (130)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{220}}{\mathbf{387,04}}$$

$$= \mathbf{0,5684}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{570} - \frac{\mathbf{(130)^2}}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2222}$$

Tabel Hasil Uji Validitas pada pertanyaan 4 dalam kuisioner mesin

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	5	21	25	441	105
3	5	20	25	400	100
4	4	22	16	484	88
5	5	21	25	441	105
6	4	20	16	400	80
7	4	20	16	400	80
8	5	21	25	441	105
9	5	20	25	400	100
10	5	23	25	529	115
11	5	22	25	484	110
12	4	21	16	441	84
13	5	20	25	400	100
14	4	20	16	400	80
15	4	22	16	484	88
16	4	21	16	441	84
17	5	22	25	484	110
18	4	20	16	400	80
19	4	21	16	441	84
20	4	21	16	441	84
21	5	23	25	529	115
22	5	22	25	484	110
23	4	21	16	441	84
24	4	21	16	441	84
25	4	20	16	400	80
26	5	22	25	484	110
27	4	21	16	441	84
28	4	20	16	400	80
29	4	20	16	400	80
30	4	20	16	400	80
$\sum$	132	629	588	13213	2773

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2773) - (132)(629)}{\sqrt{[30(588) - (132)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{162}}{\mathbf{402,22}}$$

$$= \mathbf{0,4027}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{588} - \frac{(\mathbf{132})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,24}$$

Tabel Hasil Uji Validitas pada pertanyaan 5 dalam kuisioner Performance mesin

NO	X	Y	X^2	Y^2	XY
1	3	21	9	441	63
2	3	21	9	441	63
3	3	20	9	400	60
4	4	22	16	484	88
5	3	21	9	441	63
6	4	20	16	400	80
7	3	20	9	400	60
8	3	21	9	441	63
9	3	20	9	400	60
10	4	23	16	529	92
11	4	22	16	484	88
12	5	21	25	441	105
13	3	20	9	400	60
14	3	20	9	400	60
15	4	22	16	484	88
16	3	21	9	441	63
17	4	22	16	484	88
18	4	20	16	400	80
19	3	21	9	441	63
20	4	21	16	441	84
21	4	23	16	529	92
22	4	22	16	484	88
23	4	21	16	441	84
24	4	21	16	441	84
25	3	20	9	400	60
26	4	22	16	484	88
27	4	21	16	441	84
28	3	20	9	400	60
29	3	20	9	400	60
30	3	20	9	400	60
$\sum$	106	629	384	13213	2231

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2231) - (106)(629)}{\sqrt{[30(384) - (106)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{256}}{\mathbf{461,21}}$$

$$= \mathbf{0,5550}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2 = \frac{\sum x_i^2 - \frac{(\sum x_i)^2}{n}}{n}}$$

$$= \frac{\mathbf{384 - \frac{(106)^2}{30}}}{\mathbf{30}}$$

$$= \mathbf{0,3156}$$

Tabel hasil pengolahan data kuisioner Performance Mesin

NO	1	2	3	4	5	∑	∑²
1	4	5	5	4	3	21	441
2	4	5	4	5	3	21	441
3	4	4	4	5	3	20	400
4	5	4	5	4	4	22	484
5	4	5	4	5	3	21	441
6	4	4	4	4	4	20	400
7	5	4	4	4	3	20	400
8	5	4	4	5	3	21	441
9	4	4	4	5	3	20	400
10	4	5	5	5	4	23	529
11	4	5	4	5	4	22	484
12	4	4	4	4	5	21	441
13	4	4	4	5	3	20	400
14	4	5	4	4	3	20	400
15	5	4	5	4	4	22	484
16	5	4	5	4	3	21	441
17	4	5	4	5	4	22	484
18	4	4	4	4	4	20	400
19	5	4	5	4	3	21	441
20	5	4	4	4	4	21	441
21	5	4	5	5	4	23	529
22	4	5	4	5	4	22	484
23	4	4	5	4	4	21	441
24	4	4	5	4	4	21	441
25	5	4	4	4	3	20	400
26	4	4	5	5	4	22	484
27	4	5	4	4	4	21	441
28	4	5	4	4	3	20	400
29	5	4	4	4	3	20	400
30	5	4	4	4	3	20	400
∑	131	130	130	132	106	629	13213

Tabel nilai reabilitas pada kuisioner kinerja mesin

variabel indicator	nilai realibilitas
Fasilitas	
1	0,2322
2	0,2222
3	0,2222
4	0,24
5	0,3156
∑	1,2322

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{13213} - \frac{(\mathbf{629})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,83}$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{5}{5-1}\right]\left[1 - \frac{1,23}{0,83}\right]$$

$$= -0,6$$

Tabel Hasil Kuisioner Performance Supply

NO	1	2
1	4	5
2	4	4
3	3	5
4	4	4
5	3	5
6	4	5
7	4	5
8	4	5
9	4	5
10	3	4
11	4	4
12	4	5
13	4	5
14	5	5
15	4	5
16	5	5
17	4	5
18	4	5
19	4	5
20	5	5
21	4	4
22	5	5
23	4	4
24	4	4
25	3	5
26	4	5
27	3	5
28	4	4
29	3	5
30	4	4

Tabel Hasil Uji Validitas pada pertanyaan 1 dalam kuisioner Performance supply bahan baku

NO	X	Y	X^2	Y^2	XY
1	4	9	16	81	36
2	4	8	16	64	32
3	3	8	9	64	24
4	4	8	16	64	32
5	3	8	9	64	24
6	4	9	16	81	36
7	4	9	16	81	36
8	4	9	16	81	36
9	4	9	16	81	36
10	3	7	9	49	21
11	4	8	16	64	32
12	4	9	16	81	36
13	4	9	16	81	36
14	5	10	25	100	50
15	4	9	16	81	36
16	5	10	25	100	50
17	4	9	16	81	36
18	4	9	16	81	36
19	4	9	16	81	36
20	5	10	25	100	50
21	4	8	16	64	32
22	5	10	25	100	50
23	4	8	16	64	32
24	4	8	16	64	32
25	3	8	9	64	24
26	4	9	16	81	36
27	3	8	9	64	24
28	4	8	16	64	32
29	3	8	9	64	24
30	4	8	16	64	32
∑	118	259	474	2253	1029

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(1029) - (118)(259)}{\sqrt{[30(474) - (118)^2][30(2253) - (259)^2]}}$$

$$= \frac{\mathbf{308}}{\mathbf{388,15}}$$

$$= \mathbf{0,7935}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{474} - \frac{(\mathbf{118})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,3289}$$

Tabel Hasil Uji Validitas pada pertanyaan 2 dalam kuisioner Performance Supply bahan baku

NO	X	Y	X^2	Y^2	XY
1	5	9	25	81	45
2	4	8	16	64	32
3	5	8	25	64	40
4	4	8	16	64	32
5	5	8	25	64	40
6	5	9	25	81	45
7	5	9	25	81	45
8	5	9	25	81	45
9	5	9	25	81	45
10	4	7	16	49	28
11	4	8	16	64	32
12	5	9	25	81	45
13	5	9	25	81	45
14	5	10	25	100	50
15	5	9	25	81	45
16	5	10	25	100	50
17	5	9	25	81	45
18	5	9	25	81	45
19	5	9	25	81	45
20	5	10	25	100	50
21	4	8	16	64	32
22	5	10	25	100	50
23	4	8	16	64	32
24	4	8	16	64	32
25	5	8	25	64	40
26	5	9	25	81	45
27	5	8	25	64	40
28	4	8	16	64	32
29	5	8	25	64	40
30	4	8	16	64	32
∑	141	259	669	2253	1224

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(1224) - (141)(259)}{\sqrt{[30(669) - (141)^2][30(2253) - (259)^2]}}$$

$$= \frac{\mathbf{201}}{\mathbf{310,16}}$$

$$= \mathbf{0,6480}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{669} - \frac{(\mathbf{141})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,21}$$

Tabel hasil pengolahan data kuisioner Performance Supply bahan baku

NO	1	2	∑	∑²
1	4	5	9	81
2	4	4	8	64
3	3	5	8	64
4	4	4	8	64
5	3	5	8	64
6	4	5	9	81
7	4	5	9	81
8	4	5	9	81
9	4	5	9	81
10	3	4	7	49
11	4	4	8	64
12	4	5	9	81
13	4	5	9	81
14	5	5	10	100
15	4	5	9	81
16	5	5	10	100
17	4	5	9	81
18	4	5	9	81
19	4	5	9	81
20	5	5	10	100
21	4	4	8	64
22	5	5	10	100
23	4	4	8	64
24	4	4	8	64
25	3	5	8	64
26	4	5	9	81
27	3	5	8	64
28	4	4	8	64
29	3	5	8	64
30	4	4	8	64
∑	118	141	259	2253

Tabel nilai reabilitas pada kuisioner Performance supply bahan baku

variabel indicator	nilai realibilitas
kinerja Satuan	
1	0,3289
2	0,21
∑	0,2694

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{2253} - \frac{(\mathbf{259})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,5656}$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{5}{5-1}\right]\left[1 - \frac{0{,}2694}{1{,}04}\right]$$

$$= 0{,}9262$$

Tabel hasil uji validitas

NO	variabel indicator	r hitung	r tabel	keterangan
	Man power			
1	1	0,4624	0,374	valid
2	2	0,4624	0,374	valid
3	3	0,5398	0,374	valid
4	4	0,4763	0,374	valid
5	5	0,589	0,374	valid
	Mesin			
1	1	0,4278	0,374	valid
2	2	0,5583	0,374	valid
3	3	0,5684	0,374	valid
4	4	0,4027	0,374	valid
5	5	0,555	0,374	valid
	Supply bahan baku			
1	1	0,5069	0,374	valid
2	2	0,4272	0,374	valid

Tabel hasil uji reabilitas

NO	variabel indicator	realibilitas hitung
	Komandan Satuan	
1	1	0,2489
2	2	0,2489
3	3	0,4989
4	4	0,4722
5	5	0,24
	Fasilitas	
1	1	0,2322
2	2	0,2222
3	3	0,2222
4	4	0,24
5	5	0,3156
	Fasilitas	
1	1	0,3289
2	2	0,21

Tabel hasil uji total realibilitas

NO	variabel indicator	σ_i^2	$r11$
1	Performance man power	0,37	-4,86
2	Performance mesin	0,83	-0,6
3	Performance supply bahan baku	0,5656	0,9262

Kuisioner keadaan perusahaan

Tabel 4.2 kuisioner performance man power

No	**Performance man power**	SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Karyawan mengetahui bahwa kualitas dapat meningkatkan kualitas					
2	Karyawan biasanya dengan cepat memperbaiki prestasi kerjanya yang buruk					
3	Karyawan meningkatkan kualitas karena perintah dari pemimpin					
4	Perusahaan meminta pendapat karyawan dalam usaha memperbaiki kualitas					
5	Karyawan memiliki sikap kreatif dan inovatif					

Tabel 4.3 kuisioner performance mesin

No	**Performance man power**	Jawaban				
		SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Mesin berteknologi modern dengan system otomasi					
2	Mesin yang berteknologi modern dapat mempengaruhi kualitas dan kuantiti produknya					
3	Untuk pengoperasian mesin karyawan harus sesuai dengan standar operation					
4	Preventife maintenance dilakukan sesuai jadwal perawatannya					
5	Mesin pada saat operation jarang mengalami trouble					

Tabel 4.4 kuisioner performance supply bahan baku

No	**Performance supply bahan baku**	SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Material maupun supply bahan baku sesuai spesifikasi kualitasnya					
2	Supplay bahan baku ke produksi sesuai work instruksi					

Tabel Hasil Kuisioner Man power

NO	1	2	3	4	5
1	5	4	4	3	5
2	4	4	4	4	5
3	5	4	4	4	4
4	5	4	4	3	5
5	4	5	3	4	5
6	5	5	3	4	4
7	4	5	4	5	5
8	4	5	5	4	4
9	5	4	3	5	5
10	5	4	3	4	5
11	5	5	3	4	4
12	5	4	5	3	5
13	5	5	3	4	4
14	5	4	4	3	5
15	5	5	4	4	4
16	5	4	4	3	5
17	4	5	5	4	5
18	4	5	4	3	5
19	4	4	5	5	4
20	5	4	4	3	5
21	4	5	3	5	4
22	4	4	5	4	4
23	4	4	5	3	5
24	5	5	4	4	4
25	5	4	4	3	5
26	4	4	5	4	5
27	4	5	4	4	4
28	4	5	3	5	5
29	5	5	4	3	4
30	4	4	4	4	5

Tabel Hasil Uji Validitas pada pertanyaan 1 dalam kuisioner Man power

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	4	21	16	441	84
3	5	21	25	441	105
4	5	21	25	441	105
5	4	21	16	441	84
6	5	21	25	441	105
7	4	23	16	529	92
8	4	22	16	484	88
9	5	22	25	484	110
10	5	21	25	441	105
11	5	21	25	441	105
12	5	22	25	484	110
13	5	21	25	441	105
14	5	21	25	441	105
15	5	22	25	484	110
16	5	21	25	441	105
17	4	23	16	529	92
18	4	21	16	441	84
19	4	22	16	484	88
20	5	21	25	441	105
21	4	21	16	441	84
22	4	21	16	441	84
23	4	21	16	441	84
24	5	22	25	484	110
25	5	21	25	441	105
26	4	22	16	484	88
27	4	21	16	441	84
28	4	22	16	484	88
29	5	21	25	441	105
30	4	21	16	441	84
$\sum$	136	642	624	13750	2908

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2908) - (136)(642)}{\sqrt{[30(624) - (136)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{72}}{\mathbf{274,34}}$$

$$= \mathbf{0,4624}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2 = \frac{\sum x_i^2 - \frac{(\sum x_i)^2}{n}}{n}}$$

$$= \frac{\mathbf{624 - \frac{(136)^2}{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2489}$$

Tabel Hasil Uji Validitas pada pertanyaan 2 dalam kuisioner Performance man power

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	4	21	16	441	84
3	4	21	16	441	84
4	4	21	16	441	84
5	5	21	25	441	105
6	5	21	25	441	105
7	5	23	25	529	115
8	5	22	25	484	110
9	4	22	16	484	88
10	4	21	16	441	84
11	5	21	25	441	105
12	4	22	16	484	88
13	5	21	25	441	105
14	4	21	16	441	84
15	5	22	25	484	110
16	4	21	16	441	84
17	5	23	25	529	115
18	5	21	25	441	105
19	4	22	16	484	88
20	4	21	16	441	84
21	5	21	25	441	105
22	4	21	16	441	84
23	4	21	16	441	84
24	5	22	25	484	110
25	4	21	16	441	84
26	4	22	16	484	88
27	5	21	25	441	105
28	5	22	25	484	110
29	5	21	25	441	105
30	4	21	16	441	84
$\sum$	134	642	606	13750	2870

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2870) - (134)(642)}{\sqrt{[30(606) - (134)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{72}}{\mathbf{274,34}}$$

$$= \mathbf{0,4624}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{606} - \frac{(\mathbf{134})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2489}$$

Tabel Hasil Uji Validitas pada pertanyaan 3 dalam kuisioner Performance man power

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	4	21	16	441	84
3	4	21	16	441	84
4	4	21	16	441	84
5	3	21	9	441	63
6	3	21	9	441	63
7	4	23	16	529	92
8	5	22	25	484	110
9	3	22	9	484	66
10	3	21	9	441	63
11	3	21	9	441	63
12	5	22	25	484	110
13	3	21	9	441	63
14	4	21	16	441	84
15	4	22	16	484	88
16	4	21	16	441	84
17	5	23	25	529	115
18	4	21	16	441	84
19	5	22	25	484	110
20	4	21	16	441	84
21	3	21	9	441	63
22	5	21	25	441	105
23	5	21	25	441	105
24	4	22	16	484	88
25	4	21	16	441	84
26	5	22	25	484	110
27	4	21	16	441	84
28	3	22	9	484	66
29	4	21	16	441	84
30	4	21	16	441	84
∑	119	642	487	13750	2551

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2551) - (119)(642)}{\sqrt{[30(487) - (119)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{132}}{\mathbf{388,41}}$$

$$= \mathbf{0,5398}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{487} - \frac{(\mathbf{119})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,4989}$$

Tabel Hasil Uji Validitas pada pertanyaan 4 dalam kuisioner Man power

NO	X	Y	X^2	Y^2	XY
1	3	21	9	441	63
2	4	21	16	441	84
3	4	21	16	441	84
4	3	21	9	441	63
5	4	21	16	441	84
6	4	21	16	441	84
7	5	23	25	529	115
8	4	22	16	484	88
9	5	22	25	484	110
10	4	21	16	441	84
11	4	21	16	441	84
12	3	22	9	484	66
13	4	21	16	441	84
14	3	21	9	441	63
15	4	22	16	484	88
16	3	21	9	441	63
17	4	23	16	529	92
18	3	21	9	441	63
19	5	22	25	484	110
20	3	21	9	441	63
21	5	21	25	441	105
22	4	21	16	441	84
23	3	21	9	441	63
24	4	22	16	484	88
25	3	21	9	441	63
26	4	22	16	484	88
27	4	21	16	441	84
28	5	22	25	484	110
29	3	21	9	441	63
30	4	21	16	441	84
$\sum$	115	642	455	13750	2467

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2467) - (115)(642)}{\sqrt{[30(455) - (115)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{180}}{\mathbf{377,88}}$$

$$= \mathbf{0,4763}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{455} - \frac{(\mathbf{115})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,4722}$$

Tabel Hasil Uji Validitas pada pertanyaan 5 dalam kuisioner Performance man power

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	5	21	25	441	105
3	4	21	16	441	84
4	5	21	25	441	105
5	5	21	25	441	105
6	4	21	16	441	84
7	5	23	25	529	115
8	4	22	16	484	88
9	5	22	25	484	110
10	5	21	25	441	105
11	4	21	16	441	84
12	5	22	25	484	110
13	4	21	16	441	84
14	5	21	25	441	105
15	4	22	16	484	88
16	5	21	25	441	105
17	5	23	25	529	115
18	5	21	25	441	105
19	4	22	16	484	88
20	5	21	25	441	105
21	4	21	16	441	84
22	4	21	16	441	84
23	5	21	25	441	105
24	4	22	16	484	88
25	5	21	25	441	105
26	5	22	25	484	110
27	4	21	16	441	84
28	5	22	25	484	110
29	4	21	16	441	84
30	5	21	25	441	105
$\sum$	138	642	642	13750	2954

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2954) - (138)(642)}{\sqrt{[30(642) - (138)^2][30(13750) - (642)^2]}}$$

$$= \frac{\mathbf{24}}{\mathbf{269,39}}$$

$$= \mathbf{0,5890}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{642} - \frac{\mathbf{(138)^2}}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,24}$$

Tabel hasil pengolahan data kuisioner performance man power

NO	1	2	3	4	5	∑	∑²
1	5	4	4	3	5	21	441
2	5	4	4	4	5	21	441
3	5	4	4	4	4	21	441
4	5	4	4	3	5	21	441
5	5	5	3	4	5	21	441
6	5	5	3	4	4	21	441
7	5	5	4	5	5	23	529
8	5	5	5	4	4	22	484
9	5	4	3	5	5	22	484
10	5	4	3	4	5	21	441
11	5	5	3	4	4	21	441
12	5	4	5	3	5	22	484
13	5	5	3	4	4	21	441
14	5	4	4	3	5	21	441
15	5	5	4	4	4	22	484
16	5	4	4	3	5	21	441
17	5	5	5	4	5	23	529
18	5	5	4	3	5	21	441
19	5	4	5	5	4	22	484
20	5	4	4	3	5	21	441
21	5	5	3	5	4	21	441
22	5	4	5	4	4	21	441
23	5	4	5	3	5	21	441
24	5	5	4	4	4	22	484
25	5	4	4	3	5	21	441
26	5	4	5	4	5	22	484
27	5	5	4	4	4	21	441
28	5	5	3	5	5	22	484
29	5	5	4	3	4	21	441
30	5	4	4	4	5	21	441
∑	150	134	119	115	138	642	13750

Tabel nilai reabilitas pada kuisioner Performance man power

variabel indicator	nilai realibilitas
Komandan Satuan	
1	0,2489
2	0,2489
3	0,4989
4	0,4722
5	0,24
∑	1,7089

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{13750} - \frac{(\mathbf{642})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,37}$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{5}{5-1}\right]\left[1 - \frac{1,7089}{0,37}\right]$$

$$= -4,86$$

Tabel Hasil Kuisioner Performance mesin

NO	1	2	3	4	5
1	4	5	5	4	3
2	4	5	4	5	3
3	4	4	4	5	3
4	5	4	5	4	4
5	4	5	4	5	3
6	4	4	4	4	4
7	5	4	4	4	3
8	5	4	4	5	3
9	4	4	4	5	3
10	4	5	5	5	4
11	4	5	4	5	4
12	4	4	4	4	5
13	4	4	4	5	3
14	4	5	4	4	3
15	5	4	5	4	4
16	5	4	5	4	3
17	4	5	4	5	4
18	4	4	4	4	4
19	5	4	5	4	3
20	5	4	4	4	4
21	5	4	5	5	4
22	4	5	4	5	4
23	4	4	5	4	4
24	4	4	5	4	4
25	5	4	4	4	3
26	4	4	5	5	4
27	4	5	4	4	4
28	4	5	4	4	3
29	5	4	4	4	3
30	5	4	4	4	3

Tabel Hasil Uji Validitas pada pertanyaan 1 dalam kuisioner Performance mesin

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	4	21	16	441	84
3	4	20	16	400	80
4	5	22	25	484	110
5	4	21	16	441	84
6	4	20	16	400	80
7	5	20	25	400	100
8	5	21	25	441	105
9	4	20	16	400	80
10	4	23	16	529	92
11	4	22	16	484	88
12	4	21	16	441	84
13	4	20	16	400	80
14	4	20	16	400	80
15	5	22	25	484	110
16	5	21	25	441	105
17	4	22	16	484	88
18	4	20	16	400	80
19	5	21	25	441	105
20	5	21	25	441	105
21	5	23	25	529	115
22	4	22	16	484	88
23	4	21	16	441	84
24	4	21	16	441	84
25	5	20	25	400	100
26	4	22	16	484	88
27	4	21	16	441	84
28	4	20	16	400	80
29	5	20	25	400	100
30	5	20	25	400	100
$\sum$	131	629	579	13213	2747

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2747) - (131)(629)}{\sqrt{[30(579) - (131)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{11}}{\mathbf{395,65}}$$

$$= \mathbf{0,4278}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{579} - \frac{(\mathbf{131})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2322}$$

Tabel Hasil Uji Validitas pada pertanyaan 2 dalam kuisioner Mesin

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	5	21	25	441	105
3	4	20	16	400	80
4	4	22	16	484	88
5	5	21	25	441	105
6	4	20	16	400	80
7	4	20	16	400	80
8	4	21	16	441	84
9	4	20	16	400	80
10	5	23	25	529	115
11	5	22	25	484	110
12	4	21	16	441	84
13	4	20	16	400	80
14	5	20	25	400	100
15	4	22	16	484	88
16	4	21	16	441	84
17	5	22	25	484	110
18	4	20	16	400	80
19	4	21	16	441	84
20	4	21	16	441	84
21	4	23	16	529	92
22	5	22	25	484	110
23	4	21	16	441	84
24	4	21	16	441	84
25	4	20	16	400	80
26	4	22	16	484	88
27	5	21	25	441	105
28	5	20	25	400	100
29	4	20	16	400	80
30	4	20	16	400	80
$\sum$	130	629	570	13213	2729

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2729) - (130)(629)}{\sqrt{[30(570) - (130)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{100}}{\mathbf{387,04}}$$

$$= \mathbf{0,5583}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{570} - \frac{(\mathbf{130})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2222}$$

Tabel Hasil Uji Validitas pada pertanyaan 3 dalam kuisioner Performance mesin

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	4	21	16	441	84
3	4	20	16	400	80
4	5	22	25	484	110
5	4	21	16	441	84
6	4	20	16	400	80
7	4	20	16	400	80
8	4	21	16	441	84
9	4	20	16	400	80
10	5	23	25	529	115
11	4	22	16	484	88
12	4	21	16	441	84
13	4	20	16	400	80
14	4	20	16	400	80
15	5	22	25	484	110
16	5	21	25	441	105
17	4	22	16	484	88
18	4	20	16	400	80
19	5	21	25	441	105
20	4	21	16	441	84
21	5	23	25	529	115
22	4	22	16	484	88
23	5	21	25	441	105
24	5	21	25	441	105
25	4	20	16	400	80
26	5	22	25	484	110
27	4	21	16	441	84
28	4	20	16	400	80
29	4	20	16	400	80
30	4	20	16	400	80
$\sum$	130	629	570	13213	2733

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2733) - (130)(629)}{\sqrt{[30(570) - (130)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{220}}{\mathbf{387,04}}$$

$$= \mathbf{0,5684}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{570} - \frac{\mathbf{(130)^2}}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2222}$$

Tabel Hasil Uji Validitas pada pertanyaan 4 dalam kuisioner mesin

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	5	21	25	441	105
3	5	20	25	400	100
4	4	22	16	484	88
5	5	21	25	441	105
6	4	20	16	400	80
7	4	20	16	400	80
8	5	21	25	441	105
9	5	20	25	400	100
10	5	23	25	529	115
11	5	22	25	484	110
12	4	21	16	441	84
13	5	20	25	400	100
14	4	20	16	400	80
15	4	22	16	484	88
16	4	21	16	441	84
17	5	22	25	484	110
18	4	20	16	400	80
19	4	21	16	441	84
20	4	21	16	441	84
21	5	23	25	529	115
22	5	22	25	484	110
23	4	21	16	441	84
24	4	21	16	441	84
25	4	20	16	400	80
26	5	22	25	484	110
27	4	21	16	441	84
28	4	20	16	400	80
29	4	20	16	400	80
30	4	20	16	400	80
$\sum$	132	629	588	13213	2773

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2773) - (132)(629)}{\sqrt{[30(588) - (132)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{162}}{\mathbf{402,22}}$$

$$= \mathbf{0,4027}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{588} - \frac{(\mathbf{132})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,24}$$

Tabel Hasil Uji Validitas pada pertanyaan 5 dalam kuisioner Performance mesin

NO	X	Y	X^2	Y^2	XY
1	3	21	9	441	63
2	3	21	9	441	63
3	3	20	9	400	60
4	4	22	16	484	88
5	3	21	9	441	63
6	4	20	16	400	80
7	3	20	9	400	60
8	3	21	9	441	63
9	3	20	9	400	60
10	4	23	16	529	92
11	4	22	16	484	88
12	5	21	25	441	105
13	3	20	9	400	60
14	3	20	9	400	60
15	4	22	16	484	88
16	3	21	9	441	63
17	4	22	16	484	88
18	4	20	16	400	80
19	3	21	9	441	63
20	4	21	16	441	84
21	4	23	16	529	92
22	4	22	16	484	88
23	4	21	16	441	84
24	4	21	16	441	84
25	3	20	9	400	60
26	4	22	16	484	88
27	4	21	16	441	84
28	3	20	9	400	60
29	3	20	9	400	60
30	3	20	9	400	60
$\sum$	106	629	384	13213	2231

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2231) - (106)(629)}{\sqrt{[30(384) - (106)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{256}}{\mathbf{461,21}}$$

$$= \mathbf{0,5550}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2 = \frac{\sum x_i^2 - \frac{(\sum x_i)^2}{n}}{n}}$$

$$= \frac{\mathbf{384 - \frac{(106)^2}{30}}}{\mathbf{30}}$$

$$= \mathbf{0,3156}$$

Tabel hasil pengolahan data kuisioner Performance Mesin

NO	1	2	3	4	5	∑	∑²
1	4	5	5	4	3	21	441
2	4	5	4	5	3	21	441
3	4	4	4	5	3	20	400
4	5	4	5	4	4	22	484
5	4	5	4	5	3	21	441
6	4	4	4	4	4	20	400
7	5	4	4	4	3	20	400
8	5	4	4	5	3	21	441
9	4	4	4	5	3	20	400
10	4	5	5	5	4	23	529
11	4	5	4	5	4	22	484
12	4	4	4	4	5	21	441
13	4	4	4	5	3	20	400
14	4	5	4	4	3	20	400
15	5	4	5	4	4	22	484
16	5	4	5	4	3	21	441
17	4	5	4	5	4	22	484
18	4	4	4	4	4	20	400
19	5	4	5	4	3	21	441
20	5	4	4	4	4	21	441
21	5	4	5	5	4	23	529
22	4	5	4	5	4	22	484
23	4	4	5	4	4	21	441
24	4	4	5	4	4	21	441
25	5	4	4	4	3	20	400
26	4	4	5	5	4	22	484
27	4	5	4	4	4	21	441
28	4	5	4	4	3	20	400
29	5	4	4	4	3	20	400
30	5	4	4	4	3	20	400
∑	131	130	130	132	106	629	13213

Tabel nilai reabilitas pada kuisioner kinerja mesin

variabel indicator	nilai realibilitas
Fasilitas	
1	0,2322
2	0,2222
3	0,2222
4	0,24
5	0,3156
∑	1,2322

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{13213} - \frac{(\mathbf{629})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,83}$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{5}{5-1}\right]\left[1 - \frac{1,23}{0,83}\right]$$

$$= -0,6$$

Tabel Hasil Kuisioner Performance Supply

NO	1	2
1	4	5
2	4	4
3	3	5
4	4	4
5	3	5
6	4	5
7	4	5
8	4	5
9	4	5
10	3	4
11	4	4
12	4	5
13	4	5
14	5	5
15	4	5
16	5	5
17	4	5
18	4	5
19	4	5
20	5	5
21	4	4
22	5	5
23	4	4
24	4	4
25	3	5
26	4	5
27	3	5
28	4	4
29	3	5
30	4	4

Tabel Hasil Uji Validitas pada pertanyaan 1 dalam kuisioner Performance supply bahan baku

NO	X	Y	X^2	Y^2	XY
1	4	9	16	81	36
2	4	8	16	64	32
3	3	8	9	64	24
4	4	8	16	64	32
5	3	8	9	64	24
6	4	9	16	81	36
7	4	9	16	81	36
8	4	9	16	81	36
9	4	9	16	81	36
10	3	7	9	49	21
11	4	8	16	64	32
12	4	9	16	81	36
13	4	9	16	81	36
14	5	10	25	100	50
15	4	9	16	81	36
16	5	10	25	100	50
17	4	9	16	81	36
18	4	9	16	81	36
19	4	9	16	81	36
20	5	10	25	100	50
21	4	8	16	64	32
22	5	10	25	100	50
23	4	8	16	64	32
24	4	8	16	64	32
25	3	8	9	64	24
26	4	9	16	81	36
27	3	8	9	64	24
28	4	8	16	64	32
29	3	8	9	64	24
30	4	8	16	64	32
∑	118	259	474	2253	1029

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(1029) - (118)(259)}{\sqrt{[30(474) - (118)^2][30(2253) - (259)^2]}}$$

$$= \frac{\mathbf{308}}{\mathbf{388,15}}$$

$$= \mathbf{0,7935}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{474} - \frac{(\mathbf{118})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,3289}$$

Tabel Hasil Uji Validitas pada pertanyaan 2 dalam kuisioner Performance Supply bahan baku

NO	X	Y	X^2	Y^2	XY
1	5	9	25	81	45
2	4	8	16	64	32
3	5	8	25	64	40
4	4	8	16	64	32
5	5	8	25	64	40
6	5	9	25	81	45
7	5	9	25	81	45
8	5	9	25	81	45
9	5	9	25	81	45
10	4	7	16	49	28
11	4	8	16	64	32
12	5	9	25	81	45
13	5	9	25	81	45
14	5	10	25	100	50
15	5	9	25	81	45
16	5	10	25	100	50
17	5	9	25	81	45
18	5	9	25	81	45
19	5	9	25	81	45
20	5	10	25	100	50
21	4	8	16	64	32
22	5	10	25	100	50
23	4	8	16	64	32
24	4	8	16	64	32
25	5	8	25	64	40
26	5	9	25	81	45
27	5	8	25	64	40
28	4	8	16	64	32
29	5	8	25	64	40
30	4	8	16	64	32
∑	141	259	669	2253	1224

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(1224) - (141)(259)}{\sqrt{[30(669) - (141)^2][30(2253) - (259)^2]}}$$

$$= \frac{\mathbf{201}}{\mathbf{310,16}}$$

$$= \mathbf{0,6480}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{669} - \frac{(\mathbf{141})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,21}$$

Tabel hasil pengolahan data kuisioner Performance Supply bahan baku

NO	1	2	∑	∑²
1	4	5	9	81
2	4	4	8	64
3	3	5	8	64
4	4	4	8	64
5	3	5	8	64
6	4	5	9	81
7	4	5	9	81
8	4	5	9	81
9	4	5	9	81
10	3	4	7	49
11	4	4	8	64
12	4	5	9	81
13	4	5	9	81
14	5	5	10	100
15	4	5	9	81
16	5	5	10	100
17	4	5	9	81
18	4	5	9	81
19	4	5	9	81
20	5	5	10	100
21	4	4	8	64
22	5	5	10	100
23	4	4	8	64
24	4	4	8	64
25	3	5	8	64
26	4	5	9	81
27	3	5	8	64
28	4	4	8	64
29	3	5	8	64
30	4	4	8	64
∑	118	141	259	2253

Tabel nilai reabilitas pada kuisioner Performance supply bahan baku

variabel indicator	nilai realibilitas
kinerja Satuan	
1	0,3289
2	0,21
∑	0,2694

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{2253} - \frac{(\mathbf{259})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,5656}$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{5}{5-1}\right]\left[1 - \frac{0{,}2694}{1{,}04}\right]$$

$$= 0{,}9262$$

Tabel hasil uji validitas

NO	variabel indicator	r hitung	r tabel	keterangan
	Man power			
1	1	0,4624	0,374	valid
2	2	0,4624	0,374	valid
3	3	0,5398	0,374	valid
4	4	0,4763	0,374	valid
5	5	0,589	0,374	valid
	Mesin			
1	1	0,4278	0,374	valid
2	2	0,5583	0,374	valid
3	3	0,5684	0,374	valid
4	4	0,4027	0,374	valid
5	5	0,555	0,374	valid
	Supply bahan baku			
1	1	0,5069	0,374	valid
2	2	0,4272	0,374	valid

Tabel hasil uji reabilitas

NO	variabel indicator	realibilitas hitung
	Komandan Satuan	
1	1	0,2489
2	2	0,2489
3	3	0,4989
4	4	0,4722
5	5	0,24
	Fasilitas	
1	1	0,2322
2	2	0,2222
3	3	0,2222
4	4	0,24
5	5	0,3156
	Fasilitas	
1	1	0,3289
2	2	0,21

Tabel hasil uji total realibilitas

NO	variabel indicator	σ_i^2	$r11$
1	Performance man power	0,37	-4,86
2	Performance mesin	0,83	-0,6
3	Performance supply bahan baku	0,5656	0,9262

Kuisioner keadaan perusahaan

Tabel kuisioner performance man power

No	**Performance man power**	SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Karyawan mengetahui bahwa kualitas dapat meningkatkan kualitas					
2	Karyawan biasanya dengan cepat memperbaiki prestasi kerjanya yang buruk					
3	Karyawan meningkatkan kualitas karena perintah dari pemimpin					
4	Perusahaan meminta pendapat karyawan dalam usaha memperbaiki kualitas					
5	Karyawan memiliki sikap kreatif dan inovatif					

Tabel kuisioner performance mesin

No	Performance man power	Jawaban				
		SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Mesin berteknologi modern dengan system otomasi					
2	Mesin yang berteknologi modern dapat mempengaruhi kualitas dan kuantiti produknya					
3	Untuk pengoperasian mesin karyawan harus sesuai dengan standar operation					
4	Preventife maintenance dilakukan sesuai jadwal perawatannya					
5	Mesin pada saat operation jarang mengalami trouble					

Tabel kuisioner performance supply bahan baku

No	Performance supply bahan baku	SS	ST	RG	TS	STS
	Indikator	5	4	3	2	1
1	Material maupun supply bahan baku sesuai spesifikasi kualitasnya					
2	Supplay bahan baku ke produksi sesuai work instruksi					

Tabel Hasil Kuisioner performance man power

NO	1	2	3	4	5
1	4	5	5	4	3
2	4	5	4	5	3
3	4	4	4	5	3
4	5	4	5	4	4
5	4	5	4	5	3
6	4	4	4	4	4
7	5	4	4	4	3
8	5	4	4	5	3
9	4	4	4	5	3
10	4	5	5	5	4
11	4	5	4	5	4
12	4	4	4	4	5
13	4	4	4	5	3
14	4	5	4	4	3
15	5	4	5	4	4
16	5	4	5	4	3
17	4	5	4	5	4
18	4	4	4	4	4
19	5	4	5	4	3
20	5	4	4	4	4
21	5	4	5	5	4
22	4	5	4	5	4
23	4	4	5	4	4
24	4	4	5	4	4
25	5	4	4	4	3
26	4	4	5	5	4
27	4	5	4	4	4
28	4	5	4	4	3
29	5	4	4	4	3
30	5	4	4	4	3

Tabel Hasil Uji Validitas pada pertanyaan 1 dalam kuisioner performance man power

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	4	21	16	441	84
3	4	20	16	400	80
4	5	22	25	484	110
5	4	21	16	441	84
6	4	20	16	400	80
7	5	20	25	400	100
8	5	21	25	441	105
9	4	20	16	400	80
10	4	23	16	529	92
11	4	22	16	484	88
12	4	21	16	441	84
13	4	20	16	400	80
14	4	20	16	400	80
15	5	22	25	484	110
16	5	21	25	441	105
17	4	22	16	484	88
18	4	20	16	400	80
19	5	21	25	441	105
20	5	21	25	441	105
21	5	23	25	529	115
22	4	22	16	484	88
23	4	21	16	441	84
24	4	21	16	441	84
25	5	20	25	400	100
26	4	22	16	484	88
27	4	21	16	441	84
28	4	20	16	400	80
29	5	20	25	400	100
30	5	20	25	400	100
$\sum$	131	629	579	13213	2747

Uji Validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2747) - (131)(629)}{\sqrt{[30(579) - (131)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{11}}{\mathbf{395,65}}$$

$$= \mathbf{0,427}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{579} - \frac{(\mathbf{131})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2322}$$

Tabel Hasil Uji Validitas pada pertanyaan 2 dalam kuisioner performance man power

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	5	21	25	441	105
3	4	20	16	400	80
4	4	22	16	484	88
5	5	21	25	441	105
6	4	20	16	400	80
7	4	20	16	400	80
8	4	21	16	441	84
9	4	20	16	400	80
10	5	23	25	529	115
11	5	22	25	484	110
12	4	21	16	441	84
13	4	20	16	400	80
14	5	20	25	400	100
15	4	22	16	484	88
16	4	21	16	441	84
17	5	22	25	484	110
18	4	20	16	400	80
19	4	21	16	441	84
20	4	21	16	441	84
21	4	23	16	529	92
22	5	22	25	484	110
23	4	21	16	441	84
24	4	21	16	441	84
25	4	20	16	400	80
26	4	22	16	484	88
27	5	21	25	441	105
28	5	20	25	400	100
29	4	20	16	400	80
30	4	20	16	400	80
∑	130	629	570	13213	2729

Uji Validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2729) - (130)(629)}{\sqrt{[30(570) - (130)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{100}}{\mathbf{387,04}}$$

$$= 0{,}5583$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{570} - \frac{(\mathbf{130})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2222}$$

Tabel Hasil Uji Validitas pada pertanyaan 3 dalam kuisioner performance man power

NO	X	Y	X^2	Y^2	XY
1	5	21	25	441	105
2	4	21	16	441	84
3	4	20	16	400	80
4	5	22	25	484	110
5	4	21	16	441	84
6	4	20	16	400	80
7	4	20	16	400	80
8	4	21	16	441	84
9	4	20	16	400	80
10	5	23	25	529	115
11	4	22	16	484	88
12	4	21	16	441	84
13	4	20	16	400	80
14	4	20	16	400	80
15	5	22	25	484	110
16	5	21	25	441	105
17	4	22	16	484	88
18	4	20	16	400	80
19	5	21	25	441	105
20	4	21	16	441	84
21	5	23	25	529	115
22	4	22	16	484	88
23	5	21	25	441	105
24	5	21	25	441	105
25	4	20	16	400	80
26	5	22	25	484	110
27	4	21	16	441	84
28	4	20	16	400	80
29	4	20	16	400	80
30	4	20	16	400	80
Σ	130	629	570	13213	2733

Uji Validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2733) - (130)(629)}{\sqrt{[30(570) - (130)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{220}}{\mathbf{387,04}}$$

$$= \mathbf{0,5684}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{570} - \frac{\mathbf{(130)^2}}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2222}$$

Tabel Hasil Uji Validitas pada pertanyaan 4 dalam kuisioner Performance man power

NO	X	Y	X^2	Y^2	XY
1	4	21	16	441	84
2	5	21	25	441	105
3	5	20	25	400	100
4	4	22	16	484	88
5	5	21	25	441	105
6	4	20	16	400	80
7	4	20	16	400	80
8	5	21	25	441	105
9	5	20	25	400	100
10	5	23	25	529	115
11	5	22	25	484	110
12	4	21	16	441	84
13	5	20	25	400	100
14	4	20	16	400	80
15	4	22	16	484	88
16	4	21	16	441	84
17	5	22	25	484	110
18	4	20	16	400	80
19	4	21	16	441	84
20	4	21	16	441	84
21	5	23	25	529	115
22	5	22	25	484	110
23	4	21	16	441	84
24	4	21	16	441	84
25	4	20	16	400	80
26	5	22	25	484	110
27	4	21	16	441	84
28	4	20	16	400	80
29	4	20	16	400	80
30	4	20	16	400	80
$\sum$	132	629	588	13213	2773

Uji Validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2773) - (132)(629)}{\sqrt{[30(588) - (132)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{162}}{\mathbf{402,22}}$$

$$= \mathbf{0,4027}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{588} - \frac{\mathbf{(132)^2}}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,24}$$

Tabel Hasil Uji Validitas pada pertanyaan 5 dalam kuisioner Performance man power

NO	X	Y	X^2	Y^2	XY
1	3	21	9	441	63
2	3	21	9	441	63
3	3	20	9	400	60
4	4	22	16	484	88
5	3	21	9	441	63
6	4	20	16	400	80
7	3	20	9	400	60
8	3	21	9	441	63
9	3	20	9	400	60
10	4	23	16	529	92
11	4	22	16	484	88
12	5	21	25	441	105
13	3	20	9	400	60
14	3	20	9	400	60
15	4	22	16	484	88
16	3	21	9	441	63
17	4	22	16	484	88
18	4	20	16	400	80
19	3	21	9	441	63
20	4	21	16	441	84
21	4	23	16	529	92
22	4	22	16	484	88
23	4	21	16	441	84
24	4	21	16	441	84
25	3	20	9	400	60
26	4	22	16	484	88
27	4	21	16	441	84
28	3	20	9	400	60
29	3	20	9	400	60
30	3	20	9	400	60
$\sum$	106	629	384	13213	2231

Uji Validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2231) - (106)(629)}{\sqrt{[30(384) - (106)^2][30(13213) - (629)^2]}}$$

$$= \frac{\mathbf{256}}{\mathbf{461,21}}$$

$$= \mathbf{0,5550}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2 = \frac{\sum x_i^2 - \frac{(\sum x_i)^2}{n}}{n}}$$

$$= \frac{\mathbf{384 - \frac{(106)^2}{30}}}{\mathbf{30}}$$

$$= \mathbf{0,3156}$$

Tabel pengolahan data kuisioner performance man power

NO	1	2	3	4	5	∑	∑²
1	4	5	5	4	3	21	441
2	4	5	4	5	3	21	441
3	4	4	4	5	3	20	400
4	5	4	5	4	4	22	484
5	4	5	4	5	3	21	441
6	4	4	4	4	4	20	400
7	5	4	4	4	3	20	400
8	5	4	4	5	3	21	441
9	4	4	4	5	3	20	400
10	4	5	5	5	4	23	529
11	4	5	4	5	4	22	484
12	4	4	4	4	5	21	441
13	4	4	4	5	3	20	400
14	4	5	4	4	3	20	400
15	5	4	5	4	4	22	484
16	5	4	5	4	3	21	441
17	4	5	4	5	4	22	484
18	4	4	4	4	4	20	400
19	5	4	5	4	3	21	441
20	5	4	4	4	4	21	441
21	5	4	5	5	4	23	529
22	4	5	4	5	4	22	484
23	4	4	5	4	4	21	441
24	4	4	5	4	4	21	441
25	5	4	4	4	3	20	400
26	4	4	5	5	4	22	484
27	4	5	4	4	4	21	441
28	4	5	4	4	3	20	400
29	5	4	4	4	3	20	400
30	5	4	4	4	3	20	400
∑	131	130	130	132	106	629	13213

Tabel nilai reabilitas pada kuisioner performance man power

variabel indikator	nilai realibilitas
Performance Man power	
1	0,2322
2	0,2222
3	0,2222
4	0,24
5	0,3156
∑	1,2322

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{13213} - \frac{(\mathbf{629})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,83}$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{5}{5-1}\right]\left[1 - \frac{1,23}{0,83}\right]$$

$$= -0,6$$

Tabel Hasil Kuisioner Performance Mesin

NO	1	2	3	4	5
1	4	5	4	5	5
2	4	4	5	5	5
3	3	5	4	5	4
4	4	4	5	3	5
5	3	5	4	5	4
6	4	5	5	3	5
7	4	5	5	5	4
8	4	5	5	5	5
9	4	5	4	3	4
10	3	4	4	5	5
11	4	4	4	5	5
12	4	5	5	5	4
13	4	5	5	5	5
14	5	5	5	4	4
15	4	5	5	5	4
16	5	5	4	4	5
17	4	5	5	4	5
18	4	5	4	4	5
19	4	5	5	5	5
20	5	5	5	4	4
21	4	4	5	5	5
22	5	5	4	5	5
23	4	4	5	4	5
24	4	4	5	4	5
25	3	5	5	5	5
26	4	5	5	5	4
27	3	5	4	4	5
28	4	4	5	5	5
29	3	5	5	5	4
30	4	4	5	4	5
∑	118	141	140	135	140
rata-rata	3,93	4,7	4,6	4,5	4,6

Tabel Hasil Uji Validitas pertanyaan 1 dalam kuisioner Performance mesin

NO	X	Y	X^2	Y^2	XY
1	4	23	16	529	92
2	4	23	16	529	92
3	3	21	9	441	63
4	4	21	16	441	84
5	3	21	9	441	63
6	4	22	16	484	88
7	4	23	16	529	92
8	4	24	16	576	96
9	4	20	16	400	80
10	3	21	9	441	63
11	4	22	16	484	88
12	4	23	16	529	92
13	4	24	16	576	96
14	5	23	25	529	115
15	4	23	16	529	92
16	5	23	25	529	115
17	4	23	16	529	92
18	4	22	16	484	88
19	4	24	16	576	96
20	5	23	25	529	115
21	4	23	16	529	92
22	5	24	25	576	120
23	4	22	16	484	88
24	4	22	16	484	88
25	3	23	9	529	69
26	4	23	16	529	92
27	3	21	9	441	63
28	4	23	16	529	92
29	3	22	9	484	66
30	4	22	16	484	88
∑	118	674	474	15174	2660

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(2660) - (118)(674)}{\sqrt{[30(474) - (118)^2][30(15174) - (674)^2]}}$$

$$= \frac{\mathbf{268}}{\mathbf{528,60}}$$

$$= \mathbf{0,5069}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{474} - \frac{(\mathbf{118})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,3289}$$

Tabel Hasil Uji Validitas pertanyaan 2 dalam kuisioner performance mesin

NO	X	Y	X^2	Y^2	XY
1	5	23	25	529	115
2	4	23	16	529	92
3	5	21	25	441	105
4	4	21	16	441	84
5	5	21	25	441	105
6	5	22	25	484	110
7	5	23	25	529	115
8	5	24	25	576	120
9	5	20	25	400	100
10	4	21	16	441	84
11	4	22	16	484	88
12	5	23	25	529	115
13	5	24	25	576	120
14	5	23	25	529	115
15	5	23	25	529	115
16	5	23	25	529	115
17	5	23	25	529	115
18	5	22	25	484	110
19	5	24	25	576	120
20	5	23	25	529	115
21	4	23	16	529	92
22	5	24	25	576	120
23	4	22	16	484	88
24	4	22	16	484	88
25	5	23	25	529	115
26	5	23	25	529	115
27	5	21	25	441	105
28	4	23	16	529	92
29	5	22	25	484	110
30	4	22	16	484	88
$\sum$	141	674	669	15174	3171

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(3171) - (141)(674)}{\sqrt{[30(669) - (141)^2][30(15174) - (674)^2]}}$$

$$= \frac{\mathbf{96}}{\mathbf{422,39}}$$

$$= \mathbf{0,4272}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{669} - \frac{(\mathbf{141})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,21}$$

Tabel Hasil Uji Validitas pertanyaan 3 dalam kuisioner performance mesin

NO	X	Y	X^2	Y^2	XY
1	4	23	16	529	92
2	5	23	25	529	115
3	4	21	16	441	84
4	5	21	25	441	105
5	4	21	16	441	84
6	5	22	25	484	110
7	5	23	25	529	115
8	5	24	25	576	120
9	4	20	16	400	80
10	4	21	16	441	84
11	4	22	16	484	88
12	5	23	25	529	115
13	5	24	25	576	120
14	5	23	25	529	115
15	5	23	25	529	115
16	4	23	16	529	92
17	5	23	25	529	115
18	4	22	16	484	88
19	5	24	25	576	120
20	5	23	25	529	115
21	5	23	25	529	115
22	4	24	16	576	96
23	5	22	25	484	110
24	5	22	25	484	110
25	5	23	25	529	115
26	5	23	25	529	115
27	4	21	16	441	84
28	5	23	25	529	115
29	5	22	25	484	110
30	5	22	25	484	110
$\sum$	140	674	660	15174	3152

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(3152) - (140)(674)}{\sqrt{[30(660) - (140)^2][30(15174) - (674)^2]}}$$

$$= \frac{\mathbf{200}}{\mathbf{434,51}}$$

$$= \mathbf{0,4602}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{660} - \frac{\mathbf{(140)^2}}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2222}$$

Tabel Hasil Uji Validitas pertanyaan 4 dalam kuisioner performance mesin.

NO	X	Y	X^2	Y^2	XY
1	5	23	25	529	115
2	5	23	25	529	115
3	5	21	25	441	105
4	3	21	9	441	63
5	5	21	25	441	105
6	3	22	9	484	66
7	5	23	25	529	115
8	5	24	25	576	120
9	3	20	9	400	60
10	5	21	25	441	105
11	5	22	25	484	110
12	5	23	25	529	115
13	5	24	25	576	120
14	4	23	16	529	92
15	5	23	25	529	115
16	4	23	16	529	92
17	4	23	16	529	92
18	4	22	16	484	88
19	5	24	25	576	120
20	4	23	16	529	92
21	5	23	25	529	115
22	5	24	25	576	120
23	4	22	16	484	88
24	4	22	16	484	88
25	5	23	25	529	115
26	5	23	25	529	115
27	4	21	16	441	84
28	5	23	25	529	115
29	5	22	25	484	110
30	4	22	16	484	88
$\sum$	135	674	621	15174	3043

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(3043) - (135)(674)}{\sqrt{[30(621) - (135)^2][30(15174) - (674)^2]}}$$

$$= \frac{\mathbf{300}}{\mathbf{618,32}}$$

$$= \mathbf{0,4851}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{621} - \frac{(\mathbf{135})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,45}$$

Tabel Hasil Uji Validitas pertanyaan 5 dalam kuisioner performance mesin

NO	X	Y	X^2	Y^2	XY
1	5	23	25	529	115
2	5	23	25	529	115
3	4	21	16	441	84
4	5	21	25	441	105
5	4	21	16	441	84
6	5	22	25	484	110
7	4	23	16	529	92
8	5	24	25	576	120
9	4	20	16	400	80
10	5	21	25	441	105
11	5	22	25	484	110
12	4	23	16	529	92
13	5	24	25	576	120
14	4	23	16	529	92
15	4	23	16	529	92
16	5	23	25	529	115
17	5	23	25	529	115
18	5	22	25	484	110
19	5	24	25	576	120
20	4	23	16	529	92
21	5	23	25	529	115
22	5	24	25	576	120
23	5	22	25	484	110
24	5	22	25	484	110
25	5	23	25	529	115
26	4	23	16	529	92
27	5	21	25	441	105
28	5	23	25	529	115
29	4	22	16	484	88
30	5	22	25	484	110
$\sum$	140	674	660	15174	3148

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(3148) - (140)(674)}{\sqrt{[30(660) - (140)^2][30(15174) - (674)^2]}}$$

$$= \frac{\mathbf{80}}{\mathbf{434,51}}$$

$$= \mathbf{0,4841}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{660} - \frac{(\mathbf{140})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,2222}$$

Tabel hasil pengolahan data kuisioner performance mesin

NO	1	2	3	4	5	∑	∑²
1	4	5	4	5	5	23	529
2	4	4	5	5	5	23	529
3	3	5	4	5	4	21	441
4	4	4	5	3	5	21	441
5	3	5	4	5	4	21	441
6	4	5	5	3	5	22	484
7	4	5	5	5	4	23	529
8	4	5	5	5	5	24	576
9	4	5	4	3	4	20	400
10	3	4	4	5	5	21	441
11	4	4	4	5	5	22	484
12	4	5	5	5	4	23	529
13	4	5	5	5	5	24	576
14	5	5	5	4	4	23	529
15	4	5	5	5	4	23	529
16	5	5	4	4	5	23	529
17	4	5	5	4	5	23	529
18	4	5	4	4	5	22	484
19	4	5	5	5	5	24	576
20	5	5	5	4	4	23	529
21	4	4	5	5	5	23	529
22	5	5	4	5	5	24	576
23	4	4	5	4	5	22	484
24	4	4	5	4	5	22	484
25	3	5	5	5	5	23	529
26	4	5	5	5	4	23	529
27	3	5	4	4	5	21	441
28	4	4	5	5	5	23	529
29	3	5	5	5	4	22	484
30	4	4	5	4	5	22	484
∑	118	141	140	135	140	674	15174

Tabel 4.22 nilai reabilitas pada kuisioner performance mesin

variabel indicator	nilai realibilitas
Performance mesin	
1	0,3289
2	0,21
3	0,2222
4	0,45
5	0,2222
∑	1,4333

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^{\boldsymbol{2}}}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{15174} - \frac{(\mathbf{674})^{\mathbf{2}}}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{1,04}$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{5}{5-1}\right]\left[1 - \frac{1{,}4333}{1{,}04}\right]$$

$$= -0{,}4687$$

Tabel Hasil Kuisioner Performance supply bahan baku

No	1	2
1	5	4
2	5	4
3	5	4
4	4	4
5	4	4
6	4	5
7	4	4
8	4	4
9	4	4
10	4	4
11	5	4
12	3	4
13	5	5
14	4	4
15	4	4
16	4	4
17	5	5
18	4	4
19	4	4
20	4	4
21	4	4
22	5	5
23	4	4
24	4	4
25	4	4
26	4	4
27	5	5
28	5	5
29	5	5
30	5	4
∑	130	127

Tabel Hasil Uji Validitas pada pertanyaan 1 dalam performance supply bahan baku

NO	X	Y	X^2	Y^2	XY
1	5	9	25	81	45
2	5	9	25	81	45
3	5	9	25	81	45
4	4	8	16	64	32
5	4	8	16	64	32
6	4	9	16	81	36
7	4	8	16	64	32
8	4	8	16	64	32
9	4	8	16	64	32
10	4	8	16	64	32
11	5	9	25	81	45
12	3	7	9	49	21
13	5	10	25	100	50
14	4	8	16	64	32
15	4	8	16	64	32
16	4	8	16	64	32
17	5	10	25	100	50
18	4	8	16	64	32
19	4	8	16	64	32
20	4	8	16	64	32
21	4	8	16	64	32
22	5	10	25	100	50
23	4	8	16	64	32
24	4	8	16	64	32
25	4	8	16	64	32
26	4	8	16	64	32
27	5	10	25	100	50
28	5	10	25	100	50
29	5	10	25	100	50
30	5	9	25	81	45
∑	130	257	572	2223	1126

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(1126) - (130)(257)}{\sqrt{[30(572) - (130)^2][30(2223) - (257)^2]}}$$

$$= \frac{\mathbf{370}}{\mathbf{408,24}}$$

$$= \mathbf{0,9063}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{572} - \frac{(\mathbf{130})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,29}$$

Tabel Hasil Uji Validitas pada pertanyaan 2 dalam performance supply bahan baku

NO	X	Y	X^2	Y^2	XY
1	4	9	16	81	36
2	4	9	16	81	36
3	4	9	16	81	36
4	4	8	16	64	32
5	4	8	16	64	32
6	5	9	25	81	45
7	4	8	16	64	32
8	4	8	16	64	32
9	4	8	16	64	32
10	4	8	16	64	32
11	4	9	16	81	36
12	4	7	16	49	28
13	5	10	25	100	50
14	4	8	16	64	32
15	4	8	16	64	32
16	4	8	16	64	32
17	5	10	25	100	50
18	4	8	16	64	32
19	4	8	16	64	32
20	4	8	16	64	32
21	4	8	16	64	32
22	5	10	25	100	50
23	4	8	16	64	32
24	4	8	16	64	32
25	4	8	16	64	32
26	4	8	16	64	32
27	5	10	25	100	50
28	5	10	25	100	50
29	5	10	25	100	50
30	4	9	16	81	36
∑	127	257	543	2223	1097

Uji validitas

$$r = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left[n\sum {X_i}^2 - (\sum X_i)^2\right]\left[n\sum {Y_i}^2 - (\sum Y_i)^2\right]}}$$

$$r = \frac{30(1097) - (127)(257)}{\sqrt{[30(543) - (127)^2][30(2223) - (257)^2]}}$$

$$= \frac{\mathbf{271}}{\mathbf{321,2}}$$

$$= \mathbf{0,8437}$$

Uji realibilitas

$$\boldsymbol{{\sigma_b}^2} = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{\mathbf{543} - \frac{(\mathbf{127})^2}{\mathbf{30}}}{\mathbf{30}}$$

$$= \mathbf{0,18}$$

Tabel hasil pengolahan data kuisioner performance supply bahan baku

No	1	2	∑	∑²
1	5	4	9	81
2	5	4	9	81
3	5	4	9	81
4	4	4	8	64
5	4	4	8	64
6	4	5	9	81
7	4	4	8	64
8	4	4	8	64
9	4	4	8	64
10	4	4	8	64
11	5	4	9	81
12	3	4	7	49
13	5	5	10	100
14	4	4	8	64
15	4	4	8	64
16	4	4	8	64
17	5	5	10	100
18	4	4	8	64
19	4	4	8	64
20	4	4	8	64
21	4	4	8	64
22	5	5	10	100
23	4	4	8	64
24	4	4	8	64
25	4	4	8	64
26	4	4	8	64
27	5	5	10	100
28	5	5	10	100
29	5	5	10	100
30	5	4	9	81
∑	130	127	257	2223

Tabel nilai reabilitas pada kuisioner performance supply bahan baku

Variabel indicator	Nilai reabilitas
1	**0,29**
2	**0,18**
∑	**0,47**

Variance total

$$\sigma_i^2 = \frac{\sum \boldsymbol{x_i^2} - \frac{(\sum \boldsymbol{x_i})^2}{\boldsymbol{n}}}{\boldsymbol{n}}$$

$$= \frac{2223 - \frac{(257)^2}{30}}{30}$$

$$= 0{,}712$$

Untuk menghitung realibilitas dengan menggunakan rumus alpha yaitu :

$$r11 = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_i^2}\right]$$

$$= \left[\frac{2}{2-1}\right]\left[1 - \frac{0{,}47}{0{,}712}\right]$$

$$= 0{,}679$$

Lampiran - 1

Lampiran - 2