

## **LAMPIRAN**

Lampiran 01. Data Pengamatan Waktu Produksi

Pengamatan Ke-	Elemen Kerja										
	1	2	3	4	5	6	7	8	9	10	11
	menit	menit	menit	menit	menit	menit	menit	menit	menit	menit	menit
1	3.0	2.4	2.9	5.2	6.5	6.0	5.0	5.2	4.0	4.5	5.5
2	3.1	2.3	3.0	7.0	6.6	5.8	5.5	5.0	4.5	6.1	4.0
3	3.1	3.0	3.5	8.0	7.0	6.0	6.0	5.5	4.2	4.5	5.0
4	3.2	2.3	3.3	6.6	6.5	7.0	5.0	5.0	5.0	5.5	4.8
5	3.5	3.0	3.2	7.0	7.0	5.0	6.0	5.0	5.5	5.5	4.5
6	2.5	3.0	3.6	6.5	6.5	6.1	6.0	6.5	5.2	4.0	5.0
7	2.6	3.1	3.0	6.6	7.4	6.5	4.2	6.6	5.0	5.0	6.0
8	3.0	3.0	3.8	6.5	7.5	6.5	5.0	5.0	4.2	4.8	6.5
9	2.9	3.2	4.0	7.0	7.0	6.4	6.0	5.0	5.4	4.5	5.5
10	3.0	3.2	3.0	5.5	5.2	7.5	5.5	4.5	4.0	5.0	5.2
11	2.5	2.9	3.8	7.0	6.5	6.2	6.0	5.0	4.5	6.0	5.5
12	3.1	3.0	3.9	6.5	8.0	6.2	5.5	5.5	4.8	6.5	4.1
13	3.0	3.2	3.0	7.5	8.0	8.0	5.8	5.0	4.5	5.5	5.5
14	3.1	3.0	3.9	5.0	6.0	7.0	4.2	4.0	6.1	5.2	5.5
15	3.0	3.0	3.0	6.5	8.0	6.4	6.2	5.0	4.5	5.5	5.0
16	2.9	3.1	3.0	6.0	6.5	5.2	5.2	4.5	5.5	4.1	4.8
17	3.0	3.1	3.1	5.8	5.5	7.0	5.5	5.5	5.5	5.5	4.5
18	3.5	3.0	3.1	6.0	6.0	8.0	7.0	5.5	4.0	5.5	5.0
19	3.3	3.2	3.2	5.0	6.5	6.6	5.5	4.0	5.0	5.0	6.0
20	3.2	3.0	3.5	6.5	6.0	7.0	5.8	5.0	4.8	4.8	6.5
21	3.6	3.3	2.5	6.1	6.0	6.5	5.5	6.1	4.5	4.5	5.5
22	3.0	3.3	2.6	6.5	8.5	6.6	6.0	6.5	5.0	5.0	5.2
23	3.8	3.4	3.0	5.0	6.5	5.0	6.5	5.0	6.0	6.0	5.5
24	4.0	3.4	2.9	6.4	6.0	7.0	7.0	6.4	6.5	6.5	6.0
25	3.0	3.7	3.0	7.5	7.2	5.5	5.2	5.2	5.5	5.5	5.5
26	3.8	3.2	2.5	5.0	6.0	7.0	6.5	6.2	5.2	5.2	3.8
27	3.9	3.7	3.1	6.2	6.5	7.0	5.0	6.2	5.5	5.5	4.5
28	3.0	3.9	3.0	6.5	6.5	7.5	5.8	5.5	4.1	6.0	6.1
29	3.9	4.0	3.1	7.0	7.7	6.0	6.0	5.5	5.5	5.5	4.5
30	3.0	3.0	3.0	6.4	8.1	6.5	6.5	5.0	5.5	6.0	5.5
Jumlah	95.5	93.8	95.5	190.3	203.2	195.0	170.9	159.9	149.5	158.7	156.5
Rata-rata	3.2	3.1	3.2	6.3	6.8	6.5	5.7	5.3	5.0	5.3	5.2

Lampiran 02. Tabel Pengolahan Data Pengamatan

Pengamatan Ke-	Elemen kerja 1		Elemen kerja 2		Elemen kerja 3		Elemen kerja 4	
	Menit	X <sup>2</sup>	Menit	X <sup>2</sup>	Menit	X <sup>2</sup>	Menit	X <sup>2</sup>
1	3.0	9.0	2.4	5.8	2.9	8.6	5.2	27.0
2	3.1	9.6	2.3	5.1	3.0	9.0	7.0	49.0
3	3.1	9.6	3.0	9.0	3.5	12.3	8.0	64.0
4	3.2	10.2	2.3	5.3	3.3	10.7	6.6	43.6
5	3.5	12.3	3.0	9.0	3.2	10.2	7.0	49.0
6	2.5	6.3	3.0	9.0	3.6	12.6	6.5	42.3
7	2.6	6.8	3.1	9.6	3.0	9.0	6.6	43.3
8	3.0	9.0	3.0	9.0	3.8	14.4	6.5	42.3
9	2.9	8.4	3.2	10.2	4.0	16.0	7.0	49.0
10	3.0	9.0	3.2	10.2	3.0	9.0	5.5	30.3
11	2.5	6.3	2.9	8.4	3.8	14.7	7.0	49.0
12	3.1	9.6	3.0	9.0	3.9	14.8	6.5	42.3
13	3.0	9.0	3.2	10.2	3.0	9.0	7.5	56.3
14	3.1	9.6	3.0	9.0	3.9	15.3	5.0	25.0
15	3.0	9.0	3.0	8.9	3.0	9.0	6.5	42.3
16	2.9	8.6	3.1	9.6	3.0	9.0	6.0	36.0
17	3.0	9.0	3.1	9.6	3.1	9.6	5.8	33.6
18	3.5	12.3	3.0	9.0	3.1	9.6	6.0	36.0
19	3.3	10.7	3.2	10.1	3.2	10.2	5.0	25.0
20	3.2	10.2	3.0	9.0	3.5	12.3	6.5	42.3
21	3.6	12.6	3.3	10.7	2.5	6.3	6.1	36.8
22	3.0	9.0	3.3	10.8	2.6	6.8	6.5	41.8
23	3.8	14.4	3.4	11.3	3.0	9.0	5.0	25.0
24	4.0	16.0	3.4	11.8	2.9	8.4	6.4	41.4
25	3.0	9.0	3.7	13.3	3.0	9.0	7.5	56.3
26	3.8	14.7	3.2	10.2	2.5	6.3	5.0	25.0
27	3.9	14.8	3.7	13.9	3.1	9.6	6.2	38.4
28	3.0	9.0	3.9	15.1	3.0	9.0	6.5	42.3
29	3.9	15.3	4.0	16.0	3.1	9.6	7.0	49.0
30	3.0	9.0	3.0	9.0	3.0	9.0	6.4	41.0
stdev	0.40		0.39		0.40		0.78	
Rata-rata	3.18		3.13		3.18		6.34	
$\sum X$	95.45		93.75		95.45		190.25	
$(\sum X)^2$	9110.7		8789.1		9110.7		36195.1	
$(\sum X^2)$		308.3		297.3		308.3		1224.2

Pengamatan Ke-	Elemen kerja 5		Elemen kerja 6		Elemen kerja 7		Elemen kerja 8	
	Menit	X <sup>2</sup>	Menit	X <sup>2</sup>	Menit	X <sup>2</sup>	Menit	X <sup>2</sup>
1	6.5	42.3	6.0	36.0	5.0	25.0	5.2	27.0
2	6.6	43.6	5.8	33.6	5.5	30.3	5.0	25.0
3	7.0	49.0	6.0	36.0	6.0	36.0	5.5	30.3
4	6.5	42.3	7.0	49.0	5.0	25.0	5.0	25.0
5	7.0	49.0	5.0	25.0	6.0	36.0	5.0	25.0
6	6.5	42.3	6.1	36.8	6.0	36.0	6.5	42.3
7	7.4	54.8	6.5	41.8	4.2	17.6	6.6	43.3
8	7.5	56.3	6.5	42.3	5.0	25.0	5.0	25.0
9	7.0	49.0	6.4	41.4	6.0	36.0	5.0	25.0
10	5.2	27.0	7.5	56.3	5.5	30.3	4.5	20.3
11	6.5	42.3	6.2	38.6	6.0	36.0	5.0	25.0
12	8.0	64.0	6.2	38.4	5.5	30.3	5.5	30.3
13	8.0	64.0	8.0	64.0	5.8	33.6	5.0	25.0
14	6.0	36.0	7.0	49.0	4.2	17.6	4.0	16.0
15	8.0	64.0	6.4	41.0	6.2	38.4	5.0	25.0
16	6.5	42.3	5.2	27.0	5.2	27.0	4.5	20.3
17	5.5	30.3	7.0	49.0	5.5	30.3	5.5	30.3
18	6.0	36.0	8.0	64.0	7.0	49.0	5.5	30.3
19	6.5	42.3	6.6	43.6	5.5	30.3	4.0	16.0
20	6.0	36.0	7.0	49.0	5.8	33.6	5.0	25.0
21	6.0	36.0	6.5	42.3	5.5	30.3	6.1	36.8
22	8.5	72.3	6.6	43.3	6.0	36.0	6.5	41.8
23	6.5	42.3	5.0	25.0	6.5	42.3	5.0	25.0
24	6.0	36.0	7.0	49.0	7.0	49.0	6.4	41.4
25	7.2	51.8	5.5	30.3	5.2	27.0	5.2	27.0
26	6.0	36.0	7.0	49.0	6.5	42.3	6.2	38.6
27	6.5	42.3	7.0	49.0	5.0	25.0	6.2	38.4
28	6.5	42.3	7.5	56.3	5.8	33.6	5.5	30.3
29	7.7	59.3	6.0	36.0	6.0	36.0	5.5	30.3
30	8.1	65.6	6.5	42.3	6.5	42.3	5.0	25.0
stdev	0.83		0.77		0.68		0.69	
Rata-rata	6.77		6.50		5.70		5.33	
$\sum X$	203.20		194.97		170.90		159.87	
$(\sum X)^2$	41290.2		38012.0		29206.8		25557.4	
$(\sum X^2)$		1396.1		1284.1		987.0		865.8

Pengamatan Ke-	Elemen kerja 9		Elemen kerja 10		Elemen kerja 11	
	Menit	X <sup>2</sup>	Menit	X <sup>2</sup>	Menit	X <sup>2</sup>
1	4.0	16.0	4.5	20.3	5.5	30.3
2	4.5	20.3	6.1	37.2	4.0	16.0
3	4.2	17.6	4.5	20.3	5.0	25.0
4	5.0	25.0	5.5	30.3	4.8	23.0
5	5.5	30.3	5.5	30.3	4.5	20.3
6	5.2	27.0	4.0	16.0	5.0	25.0
7	5.0	25.0	5.0	25.0	6.0	36.0
8	4.2	17.6	4.8	23.0	6.5	42.3
9	5.4	29.2	4.5	20.3	5.5	30.3
10	4.0	16.0	5.0	25.0	5.2	27.0
11	4.5	20.3	6.0	36.0	5.5	30.3
12	4.8	23.0	6.5	42.3	4.1	16.9
13	4.5	20.3	5.5	30.3	5.5	30.3
14	6.1	37.2	5.2	27.0	5.5	30.3
15	4.5	20.3	5.5	30.3	5.0	25.0
16	5.5	30.3	4.1	16.9	4.8	23.0
17	5.5	30.3	5.5	30.3	4.5	20.3
18	4.0	16.0	5.5	30.3	5.0	25.0
19	5.0	25.0	5.0	25.0	6.0	36.0
20	4.8	23.0	4.8	23.0	6.5	42.3
21	4.5	20.3	4.5	20.3	5.5	30.3
22	5.0	25.0	5.0	25.0	5.2	27.0
23	6.0	36.0	6.0	36.0	5.5	30.3
24	6.5	42.3	6.5	42.3	6.0	36.0
25	5.5	30.3	5.5	30.3	5.5	30.3
26	5.2	27.0	5.2	27.0	3.8	14.6
27	5.5	30.3	5.5	30.3	4.5	20.3
28	4.1	16.9	6.0	36.0	6.1	37.2
29	5.5	30.3	5.5	30.3	4.5	20.3
30	5.5	30.3	6.0	36.0	5.5	30.3
stdev	0.67		0.65		0.69	
Rata-rata	4.98		5.29		5.22	
$\sum X$	149.52		158.72		156.53	
$(\sum X)^2$	22355.2		25191.0		24502.7	
$(\sum X^2)$		758.0		852.1		830.6

Lampiran 03. Foto dokumentasi

