

**SKOR UJI COBA INSTRUMEN
VARIABEL Y (KEPERCAYAAN KONSUMEN)**

No. Resp.	Butir Pernyataan																																		Y _i	Y _i ²	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1	5	3	4	4	4	3	5	5	4	4	5	5	3	5	5	5	4	3	4	5	5	4	4	5	5	4	3	4	4	4	4	5	3	3	141	19881	
2	4	4	5	5	5	4	4	4	4	5	4	5	5	5	5	5	5	5	5	4	3	4	5	4	4	4	4	5	5	4	5	4	5	4	153	23409	
3	5	3	4	4	5	4	5	4	5	5	5	5	4	5	5	5	5	2	5	5	5	4	4	5	5	4	3	5	5	4	5	5	4	5	4	152	23104
4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	4	4	4	4	136	18496	
5	4	2	4	4	5	4	5	5	4	5	5	5	4	5	5	5	4	4	4	5	5	5	5	5	5	4	4	4	4	4	5	5	4	5	151	22801	
6	5	3	4	4	5	4	5	4	5	5	5	5	4	5	5	5	5	2	5	5	5	4	5	5	5	4	3	5	5	4	5	5	4	5	4	152	23104
7	5	5	5	3	3	3	3	5	4	4	5	5	3	5	5	5	5	2	5	5	5	5	3	5	5	4	3	4	3	3	4	5	3	4	4	140	19600
8	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	2	4	4	4	4	139	19321
9	4	3	3	4	5	2	5	5	3	4	5	5	3	5	5	3	3	3	4	5	4	4	5	5	3	3	3	3	3	2	4	3	3	3	127	16129	
10	4	4	4	4	5	5	5	5	4	4	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	5	4	5	4	5	4	4	148	21904
11	4	4	4	4	3	4	5	5	4	5	5	5	4	5	5	5	5	5	4	5	5	4	4	5	5	5	4	4	4	4	5	5	4	5	5	153	23409
12	4	4	4	5	4	4	5	5	4	5	5	5	4	5	5	5	5	4	4	4	5	5	4	5	5	5	4	4	4	4	4	4	4	4	4	150	22500
13	4	4	4	4	5	4	5	5	4	4	5	5	4	4	4	4	4	5	4	4	4	4	4	4	4	4	4	4	5	4	5	4	4	3	4	143	20449
14	4	4	4	4	5	4	5	5	4	5	5	5	4	5	5	4	3	4	4	4	4	3	5	5	4	4	4	4	4	4	4	5	3	4	144	20736	
15	4	4	4	4	4	4	5	5	4	5	5	5	2	5	5	4	3	4	5	5	5	4	4	4	4	4	4	4	4	4	5	4	5	4	5	146	21316
16	4	5	4	4	4	4	5	5	4	5	5	5	2	5	5	4	4	4	5	5	4	3	4	4	4	4	4	4	5	4	5	5	4	4	4	146	21316
17	4	2	3	2	4	4	5	4	4	4	3	5	2	4	4	3	3	2	4	3	4	3	4	3	3	4	2	2	2	3	2	3	3	4	111	12321	
18	4	2	3	2	5	4	4	4	4	4	4	4	2	4	4	4	4	2	5	4	5	4	3	4	4	4	4	5	4	3	5	4	5	4	5	132	17424
19	5	5	4	4	4	4	4	5	4	5	5	2	5	5	5	4	4	4	5	5	4	4	5	5	4	4	4	4	4	4	4	5	4	4	147	21609	
20	4	4	5	4	4	4	4	4	4	5	5	2	4	5	5	4	4	4	5	5	4	4	5	5	4	4	4	4	4	4	4	4	4	4	5	144	20736
21	5	5	4	5	5	5	4	4	5	5	4	5	4	5	5	5	4	5	4	4	4	5	5	5	5	5	4	4	5	5	5	4	4	5	156	24336	
22	4	4	4	4	4	4	2	5	4	4	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	4	4	4	5	5	138	19044	
23	4	5	5	4	5	5	4	4	4	4	5	4	5	4	5	4	4	4	4	5	4	4	5	4	4	5	4	5	4	4	4	5	5	4	5	150	22500
24	5	5	4	5	5	5	4	4	5	4	5	4	5	5	5	5	4	5	5	5	4	5	5	5	5	3	4	5	5	5	5	5	4	5	159	25281	
25	5	5	4	5	5	4	4	4	5	4	4	4	4	5	5	4	4	5	5	5	5	5	5	4	5	4	4	4	5	5	4	4	5	4	153	23409	
26	5	5	4	5	3	5	4	5	5	5	5	4	4	5	4	4	5	5	4	5	4	5	5	5	5	5	4	4	4	4	5	4	5	4	155	24025	
27	4	4	4	4	4	4	3	4	4	4	4	3	5	4	4	4	4	4	4	4	5	4	4	4	4	4	5	4	4	4	4	4	5	4	4	138	19044
28	4	5	4	4	4	4	2	3	4	4	5	2	5	4	4	5	3	4	4	4	4	4	4	4	4	4	5	4	4	4	5	5	4	3	136	18496	
29	4	4	5	4	4	4	2	2	4	5	5	2	5	4	4	4	2	4	4	4	4	4	4	4	5	4	4	5	4	4	4	4	5	4	135	18225	
30	4	5	5	4	4	4	4	5	4	5	5	4	5	4	4	4	4	4	4	5	5	4	4	4	4	4	5	4	4	4	5	4	5	5	149	22201	
ΣY _i	129	120	123	121	130	121	127	134	125	135	140	125	118	139	139	127	107	127	133	137	126	120	137	134	124	119	124	128	120	124	131	129	123	128	4324	626126	
ΣY _i ²	561	506	513	503	576	499	565	614	527	615	662	557	492	651	651	547	405	551	597	635	536	490	633	608	520	483	524	562	492	536	585	567	517	558			

PERHITUNGAN ANALISIS BUTIR **VARIABEL Y (KEPERCAYAAN KONSUMEN)**

Beserta contoh perhitungan untuk butir 1

1. Kolom $\sum Y_i^2$

$$\begin{aligned}\sum Y_i^2 &= 5^2 + 4^2 + 5^2 + 4^2 + \dots + 4^2 \\ &= \mathbf{561}\end{aligned}$$

2. Kolom $\sum Y_i \cdot Y_t$

$$\begin{aligned}\sum Y_i \cdot Y_t &= 5 \cdot 141 + 4 \cdot 153 + 5 \cdot 152 + 4 \cdot 136 + \dots + 4 \cdot 149 \\ &= \mathbf{18651}\end{aligned}$$

3. Kolom $\sum y_i^2$

$$\begin{aligned}\sum y_i^2 &= \sum Y_i^2 - \frac{(\sum Y_i)^2}{n} \\ &= 561 - \frac{129^2}{30} \\ &= \mathbf{6.300}\end{aligned}$$

4. Kolom $\sum y_i \cdot y_t$ = Jumlah hasil kali tiap butir dengan skor total

$$\begin{aligned}\sum y_i \cdot y_t &= \sum Y_i \cdot Y_t - \frac{(\sum Y_i)(\sum Y_t)}{n} \\ &= 18651 - \frac{129 \cdot 4324}{30} \\ &= \mathbf{57.800}\end{aligned}$$

5. Kolom $\sum y_t^2$

$$\begin{aligned}\sum y_t^2 &= \sum Y_t^2 - \frac{(\sum Y_t)^2}{n} \\ &= 626126 - \frac{4324^2}{30} \\ &= \mathbf{2893.467}\end{aligned}$$

6. Kolom r_{hitung}

$$\begin{aligned}r_{hitung} &= \frac{\sum y_i \cdot y_t}{\sqrt{(\sum y_i^2) (\sum y_t^2)}} \\ &= \frac{57.800}{\sqrt{(6.300) (2893.467)}} = \mathbf{0.428}\end{aligned}$$

**DATA PERHITUNGAN VALIDITAS
VARIABEL Y (KEPERCAYAAN KONSUMEN)**

No. Butir	ΣY_i	ΣY_i^2	$\Sigma Y_i \cdot Y_t$	Σy_i^2	$\Sigma y_i \cdot y_t$	Σy_t^2	r_{hitung}	r_{tabel}	Kesimp.
1	129	561	18651	6.30	57.80	2893.47	0.428	0.361	Valid
2	120	506	17427	26.00	131.00	2893.47	0.478	0.361	Valid
3	123	513	17797	8.70	68.60	2893.47	0.432	0.361	Valid
4	121	503	17596	14.97	155.87	2893.47	0.749	0.361	Valid
5	130	576	18768	12.67	30.67	2893.47	0.160	0.361	Drop
6	121	499	17529	10.97	88.87	2893.47	0.499	0.361	Valid
7	127	565	18339	27.37	34.07	2893.47	0.121	0.361	Drop
8	134	614	19343	15.47	29.13	2893.47	0.138	0.361	Drop
9	125	527	18096	6.17	79.33	2893.47	0.594	0.361	Valid
10	135	615	19529	7.50	71.00	2893.47	0.482	0.361	Valid
11	140	662	20253	8.67	74.33	2893.47	0.469	0.361	Valid
12	125	557	18071	36.17	54.33	2893.47	0.168	0.361	Drop
13	118	492	17133	27.87	125.27	2893.47	0.441	0.361	Valid
14	139	651	20113	6.97	78.47	2893.47	0.553	0.361	Valid
15	139	651	20108	6.97	73.47	2893.47	0.517	0.361	Valid
16	127	547	18409	9.37	104.07	2893.47	0.632	0.361	Valid
17	107	405	15530	23.37	107.73	2893.47	0.414	0.361	Valid
18	127	551	18442	13.37	137.07	2893.47	0.697	0.361	Valid
19	133	597	19233	7.37	63.27	2893.47	0.433	0.361	Valid
20	137	635	19832	9.37	85.73	2893.47	0.521	0.361	Valid
21	126	536	18170	6.80	9.20	2893.47	0.066	0.361	Drop
22	120	490	17397	10.00	101.00	2893.47	0.594	0.361	Valid
23	137	633	19823	7.37	76.73	2893.47	0.526	0.361	Valid
24	134	608	19391	9.47	77.13	2893.47	0.466	0.361	Valid
25	124	520	17984	7.47	111.47	2893.47	0.758	0.361	Valid
26	119	483	17155	10.97	3.13	2893.47	0.018	0.361	Drop
27	124	524	17949	11.47	76.47	2893.47	0.420	0.361	Valid
28	128	562	18571	15.87	121.93	2893.47	0.569	0.361	Valid
29	120	492	17435	12.00	139.00	2893.47	0.746	0.361	Valid
30	124	536	18021	23.47	148.47	2893.47	0.570	0.361	Valid
31	131	585	19026	12.97	144.53	2893.47	0.746	0.361	Valid
32	129	567	18665	12.30	71.80	2893.47	0.381	0.361	Valid
33	123	517	17815	12.70	86.60	2893.47	0.452	0.361	Valid
34	128	558	18525	11.87	75.93	2893.47	0.410	0.361	Valid

**PERHITUNGAN KEMBALI DATA UJI COBA SETELAH VALIDITAS
VARIABEL Y (KEPERCAYAAN KONSUMEN)**

No. Resp.	Butir Pernyataan																												Y _i	Y _i ²
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
1	5	3	4	4	3	4	4	5	3	5	5	4	3	4	5	5	4	5	5	4	4	4	4	4	4	5	3	3	115	13225
2	4	4	5	5	4	4	5	4	5	5	5	5	5	5	5	4	4	5	4	4	5	5	5	4	5	4	5	4	128	16384
3	5	3	4	4	4	5	5	5	4	5	5	5	2	5	5	5	4	5	5	4	5	5	4	5	5	4	5	4	126	15876
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	4	4	4	4	110	12100
5	4	2	4	4	4	4	5	5	4	5	5	4	4	4	5	5	5	5	5	4	4	4	4	4	5	5	4	5	122	14884
6	5	3	4	4	4	5	5	5	4	5	5	5	2	5	5	5	4	5	5	4	5	5	4	5	5	4	5	4	126	15876
7	5	5	5	3	3	4	4	5	3	5	5	5	2	5	5	5	3	5	5	4	4	3	3	4	5	3	4	4	116	13456
8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	2	4	4	4	4	113	12769
9	4	3	3	4	2	3	4	5	3	5	5	3	3	3	4	5	4	5	5	3	3	3	3	2	4	3	3	3	100	10000
10	4	4	4	4	5	4	4	5	5	5	5	4	4	4	4	4	4	4	4	4	4	5	4	5	4	5	4	4	120	14400
11	4	4	4	4	4	4	5	5	4	5	5	5	5	4	5	5	4	5	5	5	4	4	4	5	5	4	5	5	127	16129
12	4	4	4	5	4	4	5	5	4	5	5	5	4	4	5	4	4	5	5	5	4	4	4	4	4	4	4	4	122	14884
13	4	4	4	4	4	4	4	5	4	4	4	4	4	5	4	4	4	4	4	4	4	5	4	5	4	4	3	4	115	13225
14	4	4	4	4	4	4	5	5	4	5	5	4	3	4	4	4	3	5	5	4	4	4	4	4	4	5	3	4	116	13456
15	4	4	4	4	4	4	5	5	2	5	5	4	3	4	5	5	4	4	4	4	4	4	4	5	4	5	4	5	118	13924
16	4	5	4	4	4	4	5	5	2	5	5	4	4	4	5	5	3	4	4	4	4	5	4	5	5	4	4	4	119	14161
17	4	2	3	2	4	4	4	3	2	4	4	3	3	2	4	3	3	4	3	3	2	2	2	3	2	3	3	4	85	7225
18	4	2	3	2	4	4	4	4	2	4	4	4	2	5	4	5	3	4	4	4	5	4	3	5	4	5	4	5	107	11449
19	5	5	4	4	4	4	5	5	5	5	5	4	4	4	5	5	4	5	5	4	4	4	4	4	4	5	4	4	124	15376
20	4	4	5	4	4	4	5	5	4	5	5	4	4	4	5	5	4	5	5	4	4	4	4	4	4	4	4	5	122	14884
21	5	5	4	5	5	5	5	4	4	5	5	5	4	5	4	4	5	5	5	5	4	4	5	5	5	4	4	5	130	16900
22	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	4	4	4	4	5	5	116	13456
23	4	5	5	4	5	4	4	5	5	4	5	4	4	4	4	5	4	5	4	4	4	5	4	4	5	5	4	5	124	15376
24	5	5	4	5	5	5	4	5	5	5	5	5	4	5	5	5	5	5	5	5	4	5	5	5	5	5	4	5	135	18225
25	5	5	4	5	4	5	4	4	4	5	5	4	4	5	5	5	5	5	4	5	4	4	5	5	4	4	5	4	127	16129
26	5	5	4	5	5	5	5	5	4	5	4	4	5	5	4	5	5	5	5	5	4	4	4	4	5	5	4	5	130	16900
27	4	4	4	4	4	4	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	114	12996
28	4	5	4	4	4	4	4	5	5	4	4	5	3	4	4	4	4	4	4	4	5	4	4	4	5	5	4	3	117	13689
29	4	4	5	4	4	4	5	5	5	4	4	4	2	4	4	4	4	4	5	4	4	5	4	4	4	4	5	4	117	13689
30	4	5	5	4	4	4	5	5	5	4	4	4	4	4	4	5	4	4	4	4	4	5	4	4	5	4	5	5	122	14884
ΣY _i	129	120	123	121	121	125	135	140	118	139	139	127	107	127	133	137	120	137	134	124	124	128	120	124	131	129	123	128	3563	425927
ΣY _i ²	561	506	513	503	499	527	615	662	492	651	651	547	405	551	597	635	490	633	608	520	524	562	492	536	585	567	517	558		

**REKAPITULASI VALIDITAS
VARIABEL Y (KEPERCAYAAN KONSUMEN)**

No. Butir	ΣY_i	ΣY_i^2	$\Sigma Y_i \cdot Y_t$	Σy_i^2	$\Sigma y_i \cdot y_t$	Σy_t^2	r_{hitung}	r_{tabel}	Kesimp.
1	129	561	15381	6.30	60.10	2761.37	0.456	0.361	Valid
2	120	506	14401	26.00	149.00	2761.37	0.556	0.361	Valid
3	123	513	14689	8.70	80.70	2761.37	0.521	0.361	Valid
4	121	503	14524	14.97	153.23	2761.37	0.754	0.361	Valid
5	121	499	14460	10.97	89.23	2761.37	0.513	0.361	Valid
6	125	527	14926	6.17	80.17	2761.37	0.614	0.361	Valid
7	135	615	16101	7.50	67.50	2761.37	0.469	0.361	Valid
8	140	662	16700	8.67	72.67	2761.37	0.470	0.361	Valid
9	118	492	14164	27.87	149.53	2761.37	0.539	0.361	Valid
10	139	651	16575	6.97	66.43	2761.37	0.479	0.361	Valid
11	139	651	16569	6.97	60.43	2761.37	0.436	0.361	Valid
12	127	547	15194	9.37	110.63	2761.37	0.688	0.361	Valid
13	107	405	12802	23.37	93.97	2761.37	0.370	0.361	Valid
14	127	551	15222	13.37	138.63	2761.37	0.722	0.361	Valid
15	133	597	15857	7.37	61.03	2761.37	0.428	0.361	Valid
16	137	635	16349	9.37	77.97	2761.37	0.485	0.361	Valid
17	120	490	14353	10.00	101.00	2761.37	0.608	0.361	Valid
18	137	633	16342	7.37	70.97	2761.37	0.498	0.361	Valid
19	134	608	15995	9.47	80.27	2761.37	0.496	0.361	Valid
20	124	520	14838	7.47	110.93	2761.37	0.773	0.361	Valid
21	124	524	14815	11.47	87.93	2761.37	0.494	0.361	Valid
22	128	562	15327	15.87	124.87	2761.37	0.597	0.361	Valid
23	120	492	14392	12.00	140.00	2761.37	0.769	0.361	Valid
24	124	536	14871	23.47	143.93	2761.37	0.565	0.361	Valid
25	131	585	15704	12.97	145.57	2761.37	0.769	0.361	Valid
26	129	567	15393	12.30	72.10	2761.37	0.391	0.361	Valid
27	123	517	14710	12.70	101.70	2761.37	0.543	0.361	Valid
28	128	558	15273	11.87	70.87	2761.37	0.391	0.361	Valid

**PERHITUNGAN VARIANS BUTIR, VARIANS TOTAL DAN UJI RELIABILITAS
VARIABEL Y (KEPERCAYAAN KONSUMEN)**

No.	Varians
1	0.21
2	0.87
3	0.29
4	0.50
5	0.37
6	0.21
7	0.25
8	0.29
9	0.93
10	0.23
11	0.23
12	0.31
13	0.78
14	0.45
15	0.25
16	0.31
17	0.33
18	0.25
19	0.32
20	0.25
21	0.38
22	0.53
23	0.40
24	0.78
25	0.43
26	0.41
27	0.42
28	0.40
$\sum S_i^2$	11.36

1. Menghitung Varians tiap butir dengan rumus (Contoh No.1

$$S_i^2 = \frac{\sum Y_i^2 - \frac{(\sum Y_i)^2}{n}}{n}$$

$$= \frac{561 - \frac{129^2}{30}}{30} = \mathbf{0.21}$$

2. Menghitung varians total

$$S_t^2 = \frac{\sum Y_t^2 - \frac{(\sum Y_t)^2}{n}}{n}$$

$$= \frac{425927 - \frac{3563^2}{30}}{30} = \mathbf{92.05}$$

3. Menghitung Reabilitas

$$r_{11} = \frac{k}{k-1} \left(1 - \frac{\sum S_i^2}{S_t^2} \right)$$

$$= \frac{28}{28-1} \left(1 - \frac{11.36}{92.05} \right)$$

$$= \mathbf{0.909}$$

Kesimpulan

Dari perhitungan di atas menunjukkan bahwa rii termasuk dalam kategori (0,800 - 1,000). Maka instrumen memiliki reliabilitas yang sangat tinggi

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**SKOR UJI COBA INSTRUMEN
VARIABEL X (CITRA MEREK)**

No. Resp.	Butir Pernyataan																																		X_i	X_i^2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1	4	5	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4	5	5	5	4	5	5	5	5	4	5	4	4	4	5	5	5	5	150	22500
2	5	4	4	4	4	5	5	3	4	5	3	4	4	5	4	4	5	4	5	4	4	5	4	4	5	4	4	5	5	4	4	4	4	5	146	21316
3	5	5	5	5	5	5	5	5	5	3	5	5	5	5	4	4	2	5	5	5	4	5	4	4	5	4	4	5	4	4	5	5	4	154	23716	
4	4	4	4	4	4	4	2	4	4	3	4	4	4	4	4	4	2	4	4	4	4	4	4	4	3	4	4	4	4	3	5	3	4	129	16641	
5	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5	4	5	5	5	5	5	5	4	5	4	4	4	5	4	5	5	4	159	25281	
6	5	5	5	5	5	5	5	5	5	3	5	5	5	5	4	2	5	5	5	5	4	5	4	4	5	4	4	5	4	4	4	5	5	4	154	23716
7	4	4	4	4	3	4	4	2	4	4	4	4	4	4	5	2	2	3	3	4	3	4	5	4	4	4	3	4	2	4	5	5	5	5	129	16641
8	4	4	4	4	4	4	3	4	4	3	4	4	4	4	4	4	2	4	4	4	4	4	4	4	3	4	4	4	4	3	4	4	4	130	16900	
9	3	4	4	4	3	4	4	3	3	2	3	4	4	4	4	3	3	4	5	2	4	4	1	3	4	2	4	3	2	4	3	3	5	4	117	13689
10	4	4	4	4	4	5	5	4	4	4	4	4	5	4	4	2	4	4	4	4	4	2	4	4	4	4	4	4	4	4	4	5	5	4	137	18769
11	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	168	28224
12	5	5	4	4	4	4	4	4	4	5	3	4	4	4	5	5	4	5	4	5	4	5	5	4	4	3	4	4	4	3	5	5	5	4	145	21025
13	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	138	19044
14	4	5	4	4	4	4	5	4	4	3	4	4	4	5	3	5	4	4	3	5	4	5	4	4	4	3	4	4	5	4	3	4	5	5	141	19881
15	5	5	5	4	4	4	5	4	5	3	4	4	5	5	4	4	4	4	3	4	1	5	4	4	4	3	2	4	4	4	3	5	5	4	137	18769
16	5	5	5	5	5	4	5	5	4	4	4	4	5	5	5	4	4	5	4	4	4	5	4	4	5	3	5	4	4	4	4	5	5	4	151	22801
17	4	4	4	4	3	4	2	4	3	2	2	3	4	4	3	2	4	4	4	3	4	3	3	3	4	4	2	3	4	3	3	4	4	3	114	12996
18	5	5	4	4	4	4	5	4	5	4	4	4	4	4	5	4	4	5	3	4	4	4	4	4	4	3	4	4	4	3	3	5	5	4	140	19600
19	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	4	5	4	5	4	5	4	4	4	4	4	4	4	4	5	5	4	144	20736	
20	5	5	5	5	4	4	5	5	4	3	4	4	5	5	4	5	4	5	4	4	4	5	4	4	4	3	4	4	4	4	4	5	5	4	147	21609
21	5	4	4	5	3	5	4	5	4	4	4	5	4	4	5	2	2	4	3	5	5	4	5	4	5	3	5	5	2	5	5	4	5	143	20449	
22	5	4	4	4	4	5	4	4	4	4	4	5	4	5	4	4	2	3	3	4	4	5	4	5	4	3	4	5	4	4	5	5	4	140	19600	
23	5	5	5	4	4	5	4	4	4	4	4	4	4	5	4	5	2	3	4	4	4	4	5	4	4	4	4	1	4	4	4	5	4	138	19044	
24	4	5	5	4	5	5	4	4	4	4	4	5	4	5	4	5	4	4	4	4	3	5	4	5	4	5	4	5	4	5	4	5	5	149	22201	
25	4	5	5	4	5	4	5	4	4	4	5	4	4	5	5	5	4	4	3	5	4	5	5	5	4	5	5	5	5	5	4	4	5	154	23716	
26	4	4	4	5	4	4	4	5	5	4	5	5	5	5	4	5	4	4	5	5	5	4	4	4	5	4	5	5	4	5	5	5	4	4	152	23104
27	4	5	5	4	4	4	4	4	5	4	4	4	5	5	4	5	2	5	5	5	5	5	5	4	5	4	5	5	4	4	5	5	4	5	152	23104
28	4	4	5	4	5	5	5	4	5	4	4	4	5	4	5	5	2	4	4	5	4	5	5	4	4	4	5	5	3	4	4	5	5	4	148	21904
29	5	5	4	4	4	4	4	4	5	4	4	4	5	5	4	4	2	4	4	5	5	4	4	4	4	5	5	2	4	4	5	5	5	144	20736	
30	5	4	4	4	5	5	5	4	5	4	4	4	5	5	4	5	2	5	4	5	4	4	4	4	5	4	5	5	5	4	4	5	5	4	149	22201
$\sum X_i$	134	136	132	128	126	134	129	126	130	110	121	126	135	136	128	125	93	131	121	135	118	134	126	123	132	110	124	129	116	121	122	139	140	129	4299	619913
$\sum X_i^2$	608	624	588	552	542	606	577	542	574	418	499	536	615	624	556	545	317	585	503	617	484	614	548	511	588	414	532	565	482	495	512	653	662	563		

PERHITUNGAN ANALISIS BUTIR VARIABEL X (CITRA MEREK)

Beserta contoh perhitungan untuk butir 1

1. Kolom $\sum X_i^2$

$$\begin{aligned}\sum X_i^2 &= 4^2 + 5^2 + 5^2 + 4^2 + \dots + 5^2 \\ &= \mathbf{608}\end{aligned}$$

2. Kolom $\sum X_i \cdot X_t$

$$\begin{aligned}\sum X_i \cdot X_t &= 4 \cdot 150 + 5 \cdot 146 + 5 \cdot 154 + 4 \cdot 129 + \dots + 5 \cdot 149 \\ &= \mathbf{19294}\end{aligned}$$

3. Kolom $\sum x_i^2$

$$\begin{aligned}\sum x_i^2 &= \sum X_i^2 - \frac{(\sum X_i)^2}{n} \\ &= 608 - \frac{134^2}{30} \\ &= \mathbf{9.467}\end{aligned}$$

4. Kolom $\sum x_i \cdot x_t$ = Jumlah hasil kali tiap butir dengan skor total

$$\begin{aligned}\sum x_i \cdot x_t &= \sum X_i \cdot X_t - \frac{(\sum X_i)(\sum X_t)}{n} \\ &= 19294 - \frac{134 \cdot 4299}{30} \\ &= \mathbf{91.800}\end{aligned}$$

5. Kolom $\sum x_t^2$

$$\begin{aligned}\sum x_t^2 &= \sum X_t^2 - \frac{(\sum X_t)^2}{n} && 513675 \\ &= 619913 - \frac{4299^2}{30} \\ &= \mathbf{3866.300}\end{aligned}$$

6. Kolom r_{hitung}

$$\begin{aligned}r_{hitung} &= \frac{\sum x_i \cdot x_t}{\sqrt{(\sum x_i^2) (\sum x_t^2)}} \\ &= \frac{91.800}{\sqrt{(9.467) (3866.300)}} = \mathbf{0.480}\end{aligned}$$

**DATA PERHITUNGAN VALIDITAS
VARIABEL X (CITRA MEREK)**

No. Butir	ΣX_i	ΣX_i^2	$\Sigma X_i \cdot X_t$	Σx_i^2	$\Sigma x_i \cdot x_t$	Σx_t^2	r_{hitung}	r_{tabel}	Kesimp.
1	134	608	19294	9.47	91.80	3866.30	0.480	0.361	Valid
2	136	624	19579	7.47	90.20	3866.30	0.531	0.361	Valid
3	132	588	19007	7.20	91.40	3866.30	0.548	0.361	Valid
4	128	552	18424	5.87	81.60	3866.30	0.542	0.361	Valid
5	126	542	18225	12.80	169.20	3866.30	0.761	0.361	Valid
6	134	606	19263	7.47	60.80	3866.30	0.358	0.361	Drop
7	129	577	18655	22.30	169.30	3866.30	0.577	0.361	Valid
8	126	542	18193	12.80	137.20	3866.30	0.617	0.361	Valid
9	130	574	18768	10.67	139.00	3866.30	0.684	0.361	Valid
10	110	418	15909	14.67	146.00	3866.30	0.613	0.361	Valid
11	121	499	17488	10.97	148.70	3866.30	0.722	0.361	Valid
12	126	536	18142	6.80	86.20	3866.30	0.532	0.361	Valid
13	135	615	19435	7.50	89.50	3866.30	0.526	0.361	Valid
14	136	624	19583	7.47	94.20	3866.30	0.554	0.361	Valid
15	128	556	18430	9.87	87.60	3866.30	0.449	0.361	Valid
16	125	545	18103	24.17	190.50	3866.30	0.623	0.361	Valid
17	93	317	13385	28.70	58.10	3866.30	0.174	0.361	Drop
18	131	585	18900	12.97	127.70	3866.30	0.570	0.361	Valid
19	121	503	17418	14.97	78.70	3866.30	0.327	0.361	Drop
20	135	617	19456	9.50	110.50	3866.30	0.577	0.361	Valid
21	118	484	17039	19.87	129.60	3866.30	0.468	0.361	Valid
22	134	614	19347	15.47	144.80	3866.30	0.592	0.361	Valid
23	126	548	18217	18.80	161.20	3866.30	0.598	0.361	Valid
24	123	511	17726	6.70	100.10	3866.30	0.622	0.361	Valid
25	132	588	19028	7.20	112.40	3866.30	0.674	0.361	Valid
26	110	414	15848	10.67	85.00	3866.30	0.419	0.361	Valid
27	124	532	17936	19.47	166.80	3866.30	0.608	0.361	Valid
28	129	565	18629	10.30	143.30	3866.30	0.718	0.361	Valid
29	116	482	16774	33.47	151.20	3866.30	0.420	0.361	Valid
30	121	495	17414	6.97	74.70	3866.30	0.455	0.361	Valid
31	122	512	17630	15.87	147.40	3866.30	0.595	0.361	Valid
32	139	653	20002	8.97	83.30	3866.30	0.447	0.361	Valid
33	140	662	20108	8.67	46.00	3866.30	0.251	0.361	Drop
34	129	563	18558	8.30	72.30	3866.30	0.404	0.361	Valid

**PERHITUNGAN KEMBALI DATA UJI COBA SETELAH VALIDITAS
VARIABEL X (CITRA MEREK)**

No. Resp.	Butir Pernyataan																														X _i	X _i ²	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
1	4	5	4	4	4	4	4	4	4	4	4	4	5	4	4	5	5	4	5	5	5	5	4	5	4	4	4	5	5	5	132	17424	
2	5	4	4	4	5	3	4	5	3	4	4	5	4	4	5	4	5	4	4	5	4	4	5	4	4	5	5	4	4	4	5	129	16641
3	5	5	5	5	5	5	5	5	3	5	5	5	5	4	4	5	5	5	4	5	4	4	5	4	4	5	4	4	4	5	4	137	18769
4	4	4	4	4	4	2	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	3	5	4	116	13456	
5	5	5	5	5	5	5	5	5	4	4	4	4	5	5	5	5	5	5	5	5	5	4	5	4	4	4	5	4	4	5	4	140	19600
6	5	5	5	5	5	5	5	5	3	5	5	5	5	4	4	5	5	4	5	4	4	5	4	4	5	4	4	4	5	4	137	18769	
7	4	4	4	4	3	4	2	4	4	4	4	4	4	5	2	3	4	3	4	5	4	4	4	3	4	4	2	4	5	5	115	13225	
8	4	4	4	4	4	3	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	3	4	4	116	13456	
9	3	4	4	4	3	4	3	3	2	3	4	4	4	4	4	3	4	5	2	4	1	3	4	2	4	3	2	4	3	3	4	100	10000
10	4	4	4	4	4	5	4	4	4	4	4	5	4	4	4	4	4	4	4	2	4	4	4	4	4	4	4	4	5	4	121	14641	
11	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	149	22201	
12	5	5	4	4	4	4	4	4	5	3	4	4	4	4	5	5	5	5	4	5	5	4	4	3	4	4	4	3	5	5	4	128	16384
13	4	4	4	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	121	14641	
14	4	5	4	4	4	5	4	4	3	4	4	5	5	3	5	4	5	4	5	4	4	4	3	4	4	5	4	3	4	5	125	15625	
15	5	5	5	4	4	5	4	5	3	4	4	5	5	4	4	4	4	1	5	4	4	4	3	2	4	4	4	3	5	4	121	14641	
16	5	5	5	5	5	5	5	4	4	4	4	5	5	5	4	5	4	4	5	4	4	5	3	5	4	4	4	4	5	4	134	17956	
17	4	4	4	4	3	2	4	3	2	2	3	4	4	3	2	4	3	4	3	3	3	4	4	2	3	4	3	3	4	3	98	9604	
18	5	5	4	4	4	5	4	5	4	4	4	4	4	5	4	5	4	4	4	4	4	4	3	4	4	4	3	3	5	4	124	15376	
19	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	5	5	4	5	4	4	4	4	4	4	4	4	4	5	4	126	15876	
20	5	5	5	5	4	5	5	4	3	4	4	5	5	4	5	5	4	4	5	4	4	4	3	4	4	4	4	4	5	4	130	16900	
21	5	4	4	5	3	4	5	4	4	4	5	4	4	5	2	4	5	5	4	5	4	5	3	5	5	2	5	5	5	5	129	16641	
22	5	4	4	4	4	4	4	4	4	4	5	4	5	4	4	3	4	4	5	4	5	4	4	3	4	5	4	4	5	4	125	15625	
23	5	5	5	4	4	4	4	4	4	4	4	4	5	4	5	3	4	4	4	5	4	4	4	4	4	1	4	4	4	4	122	14884	
24	4	5	5	4	5	4	4	4	4	4	5	4	5	4	5	4	4	3	5	4	5	4	5	4	4	5	4	5	4	5	131	17161	
25	4	5	5	4	5	5	4	4	4	5	4	4	5	5	5	4	5	4	5	5	5	5	4	5	5	5	5	5	4	5	139	19321	
26	4	4	4	5	4	4	5	5	4	5	5	5	4	5	4	5	5	4	4	4	4	5	4	5	5	4	5	5	5	4	135	18225	
27	4	5	5	4	4	4	4	5	4	4	4	5	5	4	5	5	5	5	5	5	4	5	4	5	5	4	4	5	5	5	137	18769	
28	4	4	5	4	5	5	4	5	4	4	4	5	4	5	5	4	5	4	5	5	4	4	4	5	5	3	4	4	5	4	132	17424	
29	5	5	4	4	4	4	4	5	4	4	4	5	5	4	4	4	5	5	4	4	4	4	4	5	5	2	4	4	5	5	129	16641	
30	5	4	4	4	5	5	4	5	4	4	4	5	5	4	5	5	5	4	4	4	4	5	4	5	5	5	4	4	4	4	133	17689	
ΣX _i	134	136	132	128	126	129	126	130	110	121	126	135	136	128	125	131	135	118	134	126	123	132	110	124	129	116	121	122	139	129	3811	487565	
ΣX _i ²	608	624	588	552	542	577	542	574	418	499	536	615	624	556	545	585	617	484	614	548	511	588	414	532	565	482	495	512	653	563			

**REKAPITULASI VALIDITAS
VARIABEL X (CITRA MEREK)**

No. Butir	ΣX_i	ΣX_i^2	$\Sigma X_i \cdot X_t$	Σx_i^2	$\Sigma x_i \cdot x_t$	Σx_t^2	r_{hitung}	r_{tabel}	Kesimp.
1	134	608	17111	9.47	88.53	3440.97	0.491	0.361	Valid
2	136	624	17359	7.47	82.47	3440.97	0.514	0.361	Valid
3	132	588	16853	7.20	84.60	3440.97	0.537	0.361	Valid
4	128	552	16335	5.87	74.73	3440.97	0.526	0.361	Valid
5	126	542	16163	12.80	156.80	3440.97	0.747	0.361	Valid
6	129	577	16540	22.30	152.70	3440.97	0.551	0.361	Valid
7	126	542	16131	12.80	124.80	3440.97	0.595	0.361	Valid
8	130	574	16649	10.67	134.67	3440.97	0.703	0.361	Valid
9	110	418	14114	14.67	140.33	3440.97	0.625	0.361	Valid
10	121	499	15517	10.97	145.97	3440.97	0.751	0.361	Valid
11	126	536	16089	6.80	82.80	3440.97	0.541	0.361	Valid
12	135	615	17233	7.50	83.50	3440.97	0.520	0.361	Valid
13	136	624	17365	7.47	88.47	3440.97	0.552	0.361	Valid
14	128	556	16346	9.87	85.73	3440.97	0.465	0.361	Valid
15	125	545	16055	24.17	175.83	3440.97	0.610	0.361	Valid
16	131	585	16753	12.97	111.63	3440.97	0.528	0.361	Valid
17	135	617	17254	9.50	104.50	3440.97	0.578	0.361	Valid
18	118	484	15119	19.87	129.07	3440.97	0.494	0.361	Valid
19	134	614	17156	15.47	133.53	3440.97	0.579	0.361	Valid
20	126	548	16169	18.80	162.80	3440.97	0.640	0.361	Valid
21	123	511	15722	6.70	96.90	3440.97	0.638	0.361	Valid
22	132	588	16875	7.20	106.60	3440.97	0.677	0.361	Valid
23	110	414	14052	10.67	78.33	3440.97	0.409	0.361	Valid
24	124	532	15915	19.47	162.87	3440.97	0.629	0.361	Valid
25	129	565	16532	10.30	144.70	3440.97	0.769	0.361	Valid
26	116	482	14871	33.47	135.13	3440.97	0.398	0.361	Valid
27	121	495	15446	6.97	74.97	3440.97	0.484	0.361	Valid
28	122	512	15639	15.87	140.93	3440.97	0.603	0.361	Valid
29	139	653	17741	8.97	83.37	3440.97	0.475	0.361	Valid
30	129	563	16461	8.30	73.70	3440.97	0.436	0.361	Valid

**PERHITUNGAN VARIANS BUTIR, VARIANS TOTAL DAN UJI RELIABILITAS
VARIABEL X (CITRA MEREK)**

No.	Varians
1	0.32
2	0.25
3	0.24
4	0.20
5	0.43
6	0.74
7	0.43
8	0.36
9	0.49
10	0.37
11	0.23
12	0.25
13	0.25
14	0.33
15	0.81
16	0.43
17	0.32
18	0.66
19	0.52
20	0.63
21	0.22
22	0.24
23	0.36
24	0.65
25	0.34
26	1.12
27	0.23
28	0.53
29	0.30
30	0.28
$\sum S_i^2$	12.48

1. Menghitung Varians tiap butir dengan rumus (Contoh No.1)

$$S_i^2 = \frac{\sum X_i^2 - \frac{(\sum X_i)^2}{n}}{n}$$

$$= \frac{608 - \frac{134^2}{30}}{30} = \mathbf{0.32}$$

2. Menghitung varians total

$$S_t^2 = \frac{\sum X_t^2 - \frac{(\sum X_t)^2}{n}}{n}$$

$$= \frac{487565 - \frac{3811^2}{30}}{30} = \mathbf{114.70}$$

3. Menghitung Reabilitas

$$r_{11} = \frac{k}{k-1} \left(1 - \frac{\sum s_i^2}{s_t^2} \right)$$

$$= \frac{30}{30-1} \left(1 - \frac{12.48}{114.70} \right)$$

$$= \mathbf{0.922}$$

Kesimpulan

Dari perhitungan di atas menunjukkan bahwa rii termasuk dalam kategori (0,800 - 1,000). Maka instrumen memiliki reliabilitas yang sangat tinggi

**DATA MENTAH VARIABEL Y
(KEPERCAYAAN KONSUMEN**

[illegible]

**DATA MENTAH VARIABEL X
(CITRA MEREK)**

No. Resp.	Butir Pernyataan																														X _i	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
1	5	4	5	4	4	3	4	3	3	4	4	5	3	3	4	4	4	3	2	4	4	4	3	2	4	4	4	3	2	4	109	
2	4	4	5	4	5	4	5	4	5	4	4	5	4	5	4	5	4	5	4	4	5	4	4	4	4	5	3	4	4	4	128	
3	5	4	5	5	4	5	5	4	3	4	4	5	5	4	5	5	4	4	5	4	4	4	3	4	4	4	4	4	5	4	129	
4	4	4	3	4	3	4	2	4	4	4	4	2	4	2	4	3	2	3	4	3	4	3	4	3	4	2	4	3	4	2	100	
5	5	4	4	4	4	5	5	4	4	4	4	5	4	4	4	3	4	4	3	4	4	4	4	4	2	4	4	4	3	4	119	
6	5	4	4	4	5	5	4	5	4	4	4	4	5	4	4	4	2	4	4	4	4	3	4	4	3	4	4	4	4	4	121	
7	5	5	5	4	4	4	4	4	4	4	4	4	5	4	5	3	4	4	4	5	4	4	4	4	4	4	1	4	4	4	122	
8	5	5	4	4	4	4	4	4	5	3	4	4	4	5	5	5	5	4	5	5	4	4	3	4	4	4	3	5	5	4	128	
9	4	5	5	4	5	4	4	4	4	3	4	2	4	3	4	4	3	4	4	3	4	5	4	3	4	3	4	4	4	5	118	
10	4	4	4	4	3	4	4	3	5	5	4	4	4	3	5	4	3	4	3	3	4	3	4	4	3	4	3	3	4	3	112	
11	4	5	4	4	4	3	4	4	3	4	4	4	5	4	4	2	3	4	4	4	4	3	4	3	4	4	4	3	4	3	113	
12	3	2	4	4	3	2	4	4	4	3	4	2	4	4	4	4	3	4	4	2	4	4	4	3	2	4	4	4	4	3	104	
13	5	5	4	4	4	4	5	5	3	4	4	4	4	4	4	4	3	4	3	4	4	4	3	4	4	3	4	4	5	4	120	
14	4	4	4	5	4	4	4	3	4	5	5	5	4	5	4	5	5	4	4	4	4	5	4	4	2	4	4	3	4	4	124	
15	5	4	4	4	4	4	4	4	4	4	4	5	4	5	4	3	4	4	5	4	5	4	4	3	4	5	4	4	5	4	125	
16	4	4	4	5	4	4	4	5	3	4	4	3	5	4	4	3	5	4	3	4	4	3	4	4	3	2	4	4	2	4	114	
17	5	4	4	4	3	5	4	5	4	4	4	5	4	5	5	4	4	4	5	4	3	5	4	4	4	4	4	5	4	4	127	
18	4	5	5	5	4	5	5	4	4	4	4	5	5	5	4	5	4	4	3	4	4	5	3	3	4	4	4	2	4	4	125	
19	4	5	4	4	3	4	4	3	4	5	4	4	5	4	3	4	5	3	4	4	3	4	3	4	5	3	4	5	3	4	118	
20	4	4	5	5	4	4	4	4	3	4	4	4	4	4	5	4	4	4	4	4	4	4	3	4	4	4	4	3	5	4	121	
21	4	5	4	4	4	5	4	4	3	4	4	5	5	3	5	4	5	4	5	4	4	4	3	4	4	5	4	3	4	5	125	
22	4	2	4	3	4	4	4	2	4	4	4	2	5	4	4	2	2	4	4	2	4	3	4	2	4	4	2	4	3	3	101	
23	5	4	4	4	4	5	5	4	4	4	4	4	4	4	4	5	5	4	5	4	4	4	4	4	4	4	4	4	5	4	127	
24	5	4	4	4	5	3	4	5	3	4	4	5	4	4	5	4	4	3	4	4	2	4	4	2	4	4	3	4	4	4	119	
25	5	5	4	4	4	5	5	5	4	4	4	5	5	4	4	5	3	4	4	5	4	2	4	5	4	3	4	4	5	4	127	
26	4	2	2	4	4	4	4	2	4	3	4	4	4	3	4	3	4	3	4	2	4	4	3	4	4	2	3	3	4	4	103	
27	4	4	4	2	4	3	2	4	4	4	2	4	4	2	4	4	3	4	4	2	4	4	4	2	4	4	2	4	2	4	102	
28	4	4	4	4	4	3	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	3	4	5	4	4	3	4	4	4	117	
29	4	3	2	4	3	2	4	4	4	3	4	4	3	4	4	4	5	4	4	4	5	4	4	5	4	4	4	3	4	4	114	
30	3	4	4	2	4	4	2	4	4	4	2	4	4	4	3	4	2	4	4	2	4	4	3	4	3	2	4	4	4	4	104	
31	5	4	5	4	4	5	4	5	3	4	4	5	5	4	4	4	4	4	5	4	4	4	3	2	4	4	4	3	5	4	123	
32	4	4	4	5	5	4	4	3	5	5	5	5	4	4	4	4	3	4	5	5	5	4	3	4	4	5	4	5	3	4	127	
33	4	5	5	4	4	3	3	4	4	2	4	4	2	2	4	2	4	4	2	4	4	4	3	3	5	4	4	4	5	4	110	
34	3	2	4	3	4	3	4	4	2	4	4	4	3	4	4	2	4	3	4	3	3	4	4	2	2	4	3	2	4	3	99	
35	4	4	2	4	2	4	2	4	2	4	5	4	4	5	4	4	4	3	2	4	3	4	4	4	4	4	3	4	4	4	109	
36	4	5	5	4	4	4	4	4	4	5	4	4	3	4	4	5	4	4	4	4	2	4	2	4	4	2	4	4	4	3	116	
37	4	4	4	4	4	4	5	4	4	4	4	4	3	4	2	4	4	4	3	4	4	4	4	4	4	4	4	3	4	3	115	
38	4	5	4	4	5	5	5	4	5	5	5	5	4	4	4	5	4	4	5	4	4	2	4	4	3	4	4	4	4	4	127	
39	5	4	4	4	4	5	4	4	4	4	4	3	3	2	4	3	4	3	3	2	4	4	4	2	4	2	4	4	4	4	109	
40	4	4	4	4	4	5	4	4	4	4	4	4	3	2	4	2	3	3	4	2	4	2	4	4	4	4	4	2	4	4	108	
41	4	4	5	5	4	4	4	5	5	4	4	5	4	3	3	3	4	3	4	3	4	4	3	3	4	4	4	4	2	4	117	
42	4	4	3	4	4	3	4	2	4	4	4	3	4	4	3	4	2	4	4	2	4	4	3	4	3	4	4	4	2	4	106	
43	5	4	4	5	5	4	4	4	5	5	5	4	5	4	4	5	5	5	4	4	4	3	4	4	4	3	4	4	3	4	127	
44	4	4	4	4	3	4	4	3	4	2	4	4	4	4	4	2	4	3	4	3	4	3	3	4	4	3	4	3	3	4	3	106

5115

SKOR DATA MENTAH
VARIABEL X (CITRA MEREK)
DAN VARIABEL Y (KEPERCAYAAN KONSUMEN)

NO	VARIABEL X	VARIABEL Y
1	109	103
2	128	115
3	129	119
4	100	100
5	119	108
6	121	121
7	122	112
8	128	111
9	118	122
10	112	106
11	113	118
12	104	100
13	120	115
14	124	121
15	125	117
16	114	107
17	127	121
18	125	118
19	118	111
20	121	124
21	125	110
22	101	104
23	127	125
24	119	108
25	127	121
26	103	113
27	102	110
28	117	106
29	114	121
30	104	107
31	123	113
32	127	109
33	110	117
34	99	102
35	109	113
36	116	111
37	115	116
38	127	120
39	109	108
40	108	115
41	117	120
42	106	113
43	127	120
44	106	101
	5115	4972

Tabel Perhitungan Koefisien Regresi Linier Sederhana

No. Resp	X	Y	X²	Y²	XY
1	109	103	11881	10609	11227
2	128	115	16384	13225	14720
3	129	119	16641	14161	15351
4	100	100	10000	10000	10000
5	119	108	14161	11664	12852
6	121	121	14641	14641	14641
7	122	112	14884	12544	13664
8	128	111	16384	12321	14208
9	118	122	13924	14884	14396
10	112	106	12544	11236	11872
11	113	118	12769	13924	13334
12	104	100	10816	10000	10400
13	120	115	14400	13225	13800
14	124	121	15376	14641	15004
15	125	117	15625	13689	14625
16	114	107	12996	11449	12198
17	127	121	16129	14641	15367
18	125	118	15625	13924	14750
19	118	111	13924	12321	13098
20	121	124	14641	15376	15004
21	125	110	15625	12100	13750
22	101	104	10201	10816	10504
23	127	125	16129	15625	15875
24	119	108	14161	11664	12852
25	127	121	16129	14641	15367
26	103	113	10609	12769	11639
27	102	110	10404	12100	11220
28	117	106	13689	11236	12402
29	114	121	12996	14641	13794
30	104	107	10816	11449	11128
31	123	113	15129	12769	13899
32	127	109	16129	11881	13843
33	110	117	12100	13689	12870
34	99	102	9801	10404	10098
35	109	113	11881	12769	12317
36	116	111	13456	12321	12876
37	115	116	13225	13456	13340
38	127	120	16129	14400	15240
39	109	108	11881	11664	11772
40	108	115	11664	13225	12420
41	117	120	13689	14400	14040
42	106	113	11236	12769	11978
43	127	120	16129	14400	15240
44	106	101	11236	10201	10706
Jumlah	5115	4972	598189	563864	579681

**TABEL PERHITUNGAN RATA-RATA,
VARIANS DAN SIMPANGAN BAKU, VARIABEL X DAN Y**

No.	X	Y	$X - \bar{X}$	$Y - \bar{Y}$	$(X - \bar{X})^2$	$(Y - \bar{Y})^2$
1	109	103	-7.25	-10	52.56	100
2	128	115	11.75	2	138.06	4
3	129	119	12.75	6	162.56	36
4	100	100	-16.25	-13	264.06	169
5	119	108	2.75	-5	7.56	25
6	121	121	4.75	8	22.56	64
7	122	112	5.75	-1	33.06	1
8	128	111	11.75	-2	138.06	4
9	118	122	1.75	9	3.06	81
10	112	106	-4.25	-7	18.06	49
11	113	118	-3.25	5	10.56	25
12	104	100	-12.25	-13	150.06	169
13	120	115	3.75	2	14.06	4
14	124	121	7.75	8	60.06	64
15	125	117	8.75	4	76.56	16
16	114	107	-2.25	-6	5.06	36
17	127	121	10.75	8	115.56	64
18	125	118	8.75	5	76.56	25
19	118	111	1.75	-2	3.06	4
20	121	124	4.75	11	22.56	121
21	125	110	8.75	-3	76.56	9
22	101	104	-15.25	-9	232.56	81
23	127	125	10.75	12	115.56	144
24	119	108	2.75	-5	7.56	25
25	127	121	10.75	8	115.56	64
26	103	113	-13.25	0	175.56	0
27	102	110	-14.25	-3	203.06	9
28	117	106	0.75	-7	0.56	49
29	114	121	-2.25	8	5.06	64
30	104	107	-12.25	-6	150.06	36
31	123	113	6.75	0	45.56	0
32	127	109	10.75	-4	115.56	16
33	110	117	-6.25	4	39.06	16
34	99	102	-17.25	-11	297.56	121
35	109	113	-7.25	0	52.56	0
36	116	111	-0.25	-2	0.06	4
37	115	116	-1.25	3	1.56	9
38	127	120	10.75	7	115.56	49
39	109	108	-7.25	-5	52.56	25
40	108	115	-8.25	2	68.06	4
41	117	120	0.75	7	0.56	49
42	106	113	-10.25	0	105.06	0
43	127	120	10.75	7	115.56	49
44	106	101	-10.25	-12	105.06	144
Jumlah	5115	4972			3570.25	2028

PERHITUNGAN RATA-RATA, VARIANS DAN SIMPANGAN BAKU

1. Rata-rata (X)

$$\begin{aligned}\bar{X} &= \frac{\sum X}{n} \\ &= \frac{5115}{44} \\ &= \mathbf{116.25}\end{aligned}$$

1. Rata-rata (Y)

$$\begin{aligned}\bar{Y} &= \frac{\sum Y}{n} \\ &= \frac{4972}{44} \\ &= \mathbf{113}\end{aligned}$$

2. Varians (X)

$$\begin{aligned}S^2 &= \frac{\sum (X - \bar{X})^2}{n - 1} \\ &= \frac{3570.25}{43} \\ &= \mathbf{83.03}\end{aligned}$$

2. Varians (Y)

$$\begin{aligned}S^2 &= \frac{\sum (Y - \bar{Y})^2}{n - 1} \\ &= \frac{2028.00}{43} \\ &= \mathbf{47.16}\end{aligned}$$

3. Simpangan Baku (X)

$$\begin{aligned}S &= \sqrt{S^2} \\ &= \sqrt{83.03} \\ &= \mathbf{9.11}\end{aligned}$$

3. Simpangan Baku (Y)

$$\begin{aligned}S &= \sqrt{S^2} \\ &= \sqrt{47.16} \\ &= \mathbf{6.87}\end{aligned}$$

Proses Perhitungan Menggambar Grafik Histogram (KEPERCAYAAN KONSUMEN)

1. Menentukan Rentang

$$\begin{aligned}\text{Rentang} &= \text{Data terbesar} - \text{Data terkecil} \\ &= 125 - 100 \\ &= \mathbf{25}\end{aligned}$$

2. Banyaknya Interval Kelas (aturan sturges)

$$\begin{aligned}K &= 1 + (3.3) \text{ Log } n \\ &= 1 + (3.3) \log 44 \\ &= 1 + (3.3) 1.64 \\ &= 1 + 5,42 \\ &= \mathbf{6.42 \text{ (ditetapkan menjadi 7) }}\end{aligned}$$

3. Panjang Kelas Interval (KI)

$$\begin{aligned}P &= \frac{\text{Rentang}}{\text{Kelas}} \\ &= \frac{25}{7} \\ &= \mathbf{3.57 \text{ (dibulatkan menjadi 4) }}\end{aligned}$$

Kelas Interval	Batas Bawah	Batas Atas	Frekuensi Absolut	Frekuensi Relatif
100 – 103	99,5	103,5	5	11.36%
104 – 107	103,5	107,5	5	11.36%
108 – 111	107,5	111,5	9	20.45%
112 – 115	111,5	115,5	8	18.18%
116 – 119	115,5	119,5	6	13.64%
120 – 123	119,5	123,5	9	20.45%
124 – 127	123,5	127,5	2	4.55%
			44	100%

Proses Perhitungan Menggambar Grafik Histogram (CITRA MEREK)

1. Menentukan Rentang

$$\begin{aligned}\text{Rentang} &= \text{Data terbesar} - \text{Data terkecil} \\ &= 129 - 99 \\ &= \mathbf{30}\end{aligned}$$

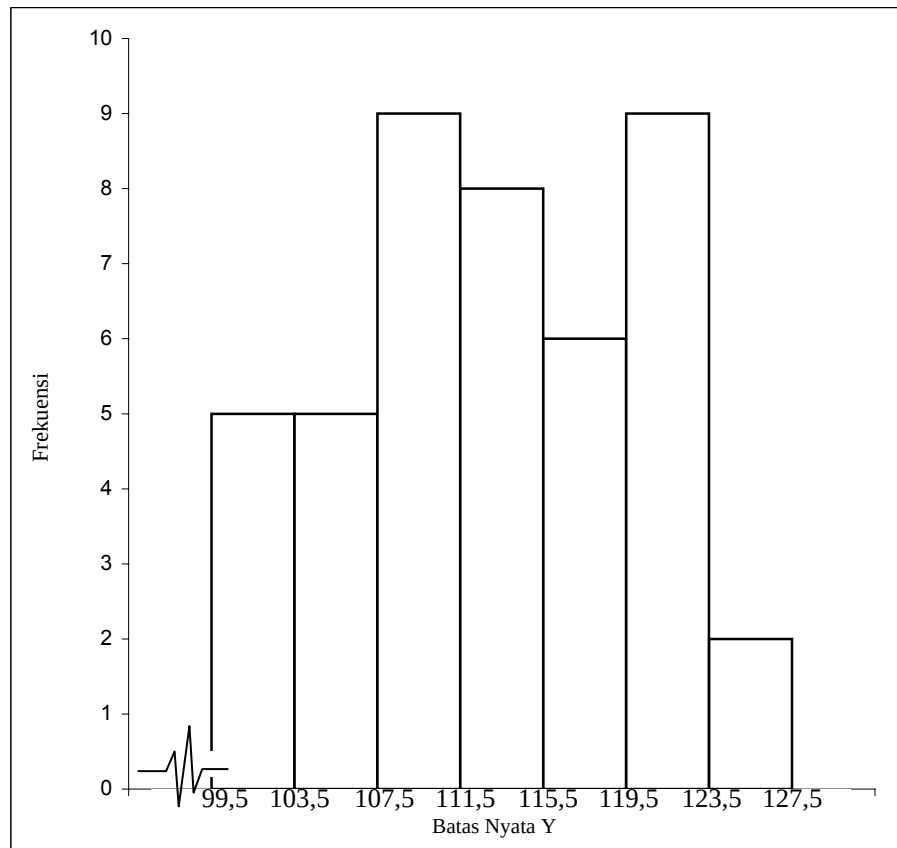
2. Banyaknya Interval Kelas (aturan sturges)

$$\begin{aligned}K &= 1 + (3.3) \text{ Log } n \\ &= 1 + (3.3) \log 44 \\ &= 1 + (3.3) 1.64 \\ &= 1 + 5,42 \\ &= \mathbf{6.42 \text{ (ditetapkan menjadi 7) }}\end{aligned}$$

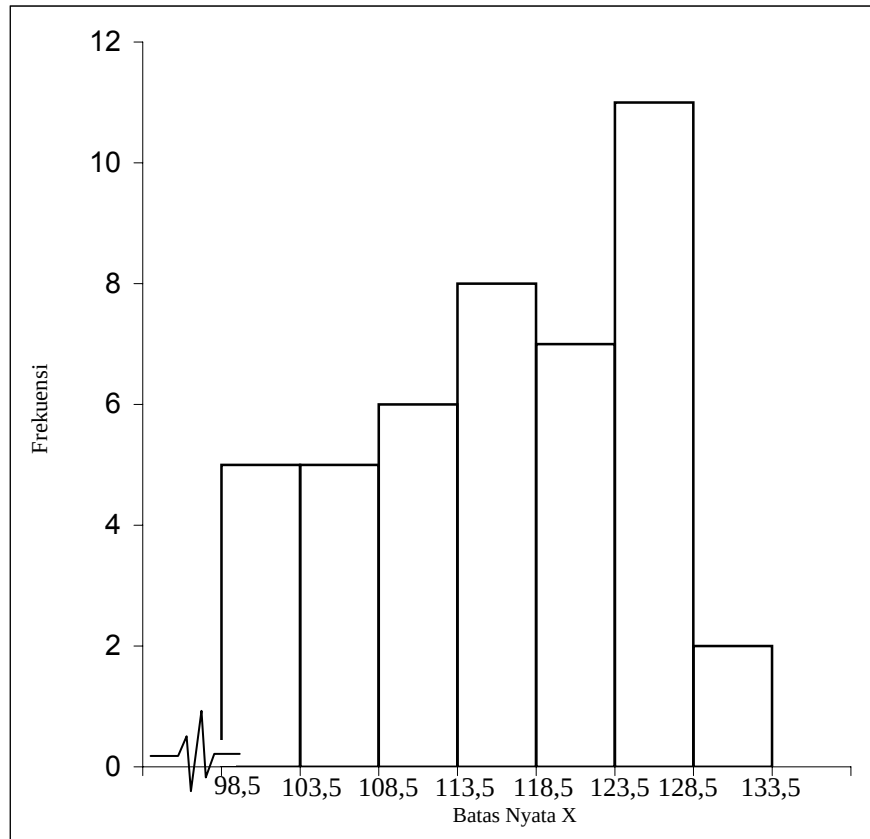
3. Panjang Kelas Interval (KI)

$$\begin{aligned}P &= \frac{\text{Rentang}}{\text{Kelas}} \\ &= \frac{30}{7} \\ &= \mathbf{4.29 \text{ (dibulatkan menjadi 5) }}\end{aligned}$$

Kelas Interval	Batas Bawah	Batas Atas	Frekuensi Absolut	Frekuensi Relatif
99 – 103	98,5	103,5	5	11.36%
104 – 108	103,5	108,5	5	11.36%
109 – 113	108,5	113,5	6	13.64%
114 – 118	113,5	118,5	8	18.18%
119 – 123	118,5	123,5	7	15.91%
124 – 128	123,5	128,5	11	25.00%
129 – 133	128,5	133,5	2	4.55%
			44	100%



**GRAFIK HISTOGRAM
VARIABEL Y (KEPERCAYAAN KONSUMEN)**



**GRAFIK HISTOGRAM
VARIABEL X (CITRA MEREK)**

PERHITUNGAN PERSAMAAN REGRESI LINEAR SEDERHANA

$$\hat{Y} = a + bX$$

$$\begin{aligned}\Sigma X^2 &= \Sigma X^2 - \frac{(\Sigma X)^2}{n} \\ &= 598189 - \frac{[5115]^2}{44} \\ &= 598189 - 594618.75 \\ &= \mathbf{3570.25}\end{aligned}$$

$$\begin{aligned}\Sigma Y^2 &= \Sigma Y^2 - \frac{(\Sigma Y)^2}{n} \\ &= 563864 - \frac{[4972]^2}{44} \\ &= 563864 - 561836 \\ &= \mathbf{2028}\end{aligned}$$

$$\begin{aligned}\Sigma xy &= \Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{n} \\ &= 579681 - \frac{(5115 \times 4972)}{44} \\ &= 579681 - 577995 \\ &= \mathbf{1686}\end{aligned}$$

$$\begin{aligned}\bar{X} &= \frac{\Sigma X}{n} = \frac{5115}{44} \\ &= \mathbf{116.25} \\ \bar{Y} &= \frac{\Sigma Y}{n} = \frac{4972}{44} \\ &= \mathbf{113}\end{aligned}$$

Persamaan regresi dengan rumus $\hat{Y} = a + bX$

$$\begin{aligned}b &= \frac{\Sigma xy}{\Sigma X^2} = \frac{1686}{3570.25} \\ &= \mathbf{0.47}\end{aligned}$$

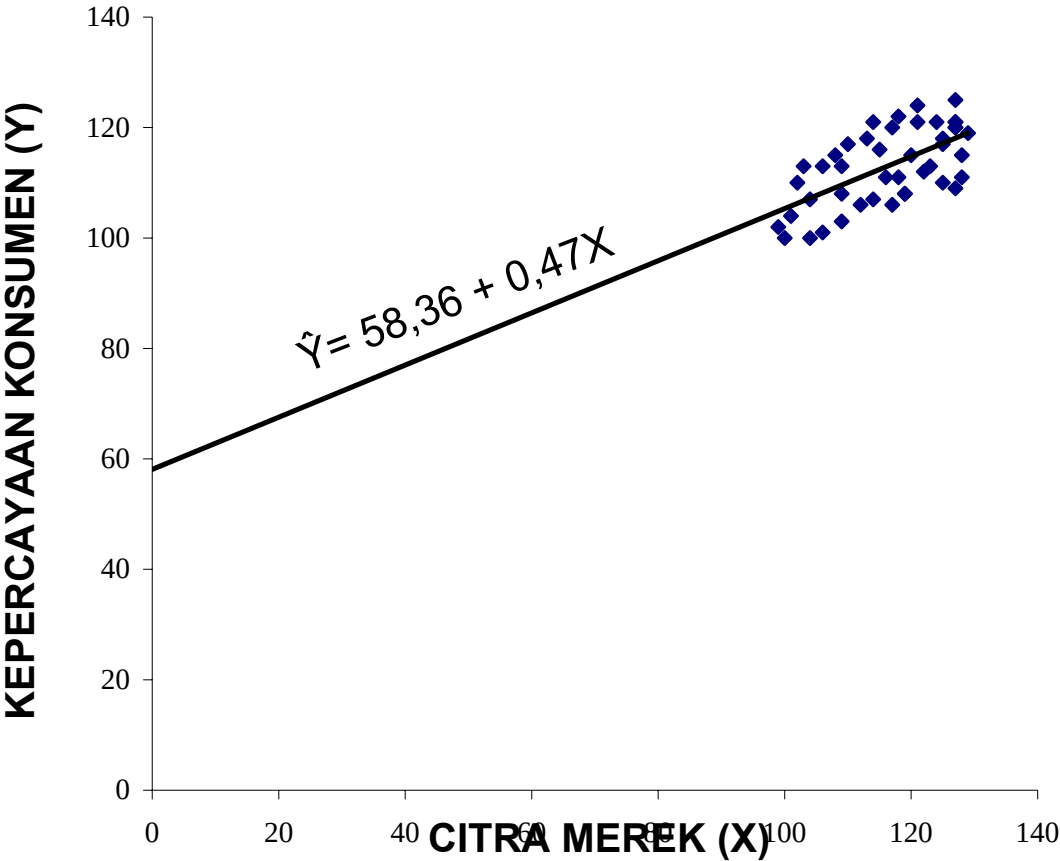
$$\begin{aligned}a &= \bar{Y} - b\bar{X} \\ &= 113 - [0.47 \times 116.25] \\ &= 113 - [54.64] \\ &= \mathbf{58.36}\end{aligned}$$

Jadi Persamaan regresi adalah $\hat{Y} = 58,36 + 0,47 X$

Tabel Untuk Menghitung $\hat{Y} = a + bX$

n	X	$\hat{Y} = 58,36 + 0,47X$	$\hat{Y}$
1	109	58.36 + 0.47 . 109	109.59
2	128	58.36 + 0.47 . 128	118.52
3	129	58.36 + 0.47 . 129	118.99
4	100	58.36 + 0.47 . 100	105.36
5	119	58.36 + 0.47 . 119	114.29
6	121	58.36 + 0.47 . 121	115.23
7	122	58.36 + 0.47 . 122	115.70
8	128	58.36 + 0.47 . 128	118.52
9	118	58.36 + 0.47 . 118	113.82
10	112	58.36 + 0.47 . 112	111.00
11	113	58.36 + 0.47 . 113	111.47
12	104	58.36 + 0.47 . 104	107.24
13	120	58.36 + 0.47 . 120	114.76
14	124	58.36 + 0.47 . 124	116.64
15	125	58.36 + 0.47 . 125	117.11
16	114	58.36 + 0.47 . 114	111.94
17	127	58.36 + 0.47 . 127	118.05
18	125	58.36 + 0.47 . 125	117.11
19	118	58.36 + 0.47 . 118	113.82
20	121	58.36 + 0.47 . 121	115.23
21	125	58.36 + 0.47 . 125	117.11
22	101	58.36 + 0.47 . 101	105.83
23	127	58.36 + 0.47 . 127	118.05
24	119	58.36 + 0.47 . 119	114.29
25	127	58.36 + 0.47 . 127	118.05
26	103	58.36 + 0.47 . 103	106.77
27	102	58.36 + 0.47 . 102	106.30
28	117	58.36 + 0.47 . 117	113.35
29	114	58.36 + 0.47 . 114	111.94
30	104	58.36 + 0.47 . 104	107.24
31	123	58.36 + 0.47 . 123	116.17
32	127	58.36 + 0.47 . 127	118.05
33	110	58.36 + 0.47 . 110	110.06
34	99	58.36 + 0.47 . 99	104.89
35	109	58.36 + 0.47 . 109	109.59
36	116	58.36 + 0.47 . 116	112.88
37	115	58.36 + 0.47 . 115	112.41
38	127	58.36 + 0.47 . 127	118.05
39	109	58.36 + 0.47 . 109	109.59
40	108	58.36 + 0.47 . 108	109.12
41	117	58.36 + 0.47 . 117	113.35
42	106	58.36 + 0.47 . 106	108.18
43	127	58.36 + 0.47 . 127	118.05
44	106	58.36 + 0.47 . 106	108.18

GRAFIK PERSAMAAN REGRESI



TABEL PERHITUNGAN RATA-RATA, VARIANS DAN SIMPANGAN BAKU

REGRESI $\hat{Y} = 58,36 + 0,47X$

No.	X	Y	$\hat{Y}$	$(Y - \hat{Y})$	$(Y - \hat{Y}) - \overline{(Y - \hat{Y})}$	$[(Y - \hat{Y}) - \overline{(Y - \hat{Y})}]^2$
1	99	102	104.89	-2.89	-2.89	8.37
2	100	100	105.36	-5.36	-5.36	28.76
3	101	104	105.83	-1.83	-1.83	3.36
4	102	110	106.30	3.70	3.70	13.67
5	103	113	106.77	6.23	6.23	38.78
6	104	100	107.24	-7.24	-7.24	52.45
7	104	107	107.24	-0.24	-0.24	0.06
8	106	101	108.18	-7.18	-7.18	51.59
9	106	113	108.18	4.82	4.82	23.21
10	108	115	109.12	5.88	5.88	34.55
11	109	103	109.59	-6.59	-6.59	43.46
12	109	113	109.59	3.41	3.41	11.61
13	109	108	109.59	-1.59	-1.59	2.54
14	110	117	110.06	6.94	6.94	48.13
15	112	106	111.00	-5.00	-5.00	25.03
16	113	118	111.47	6.53	6.53	42.61
17	114	107	111.94	-4.94	-4.94	24.43
18	114	121	111.94	9.06	9.06	82.04
19	115	116	112.41	3.59	3.59	12.87
20	116	111	112.88	-1.88	-1.88	3.54
21	117	106	113.35	-7.35	-7.35	54.06
22	117	120	113.35	6.65	6.65	44.19
23	118	111	113.82	-2.82	-2.82	7.97
24	118	122	113.82	8.18	8.18	66.87
25	119	108	114.29	-6.29	-6.29	39.60
26	119	108	114.29	-6.29	-6.29	39.60
27	120	115	114.76	0.24	0.24	0.06
28	121	124	115.23	8.77	8.77	76.87
29	121	121	115.23	5.77	5.77	33.26
30	122	112	115.70	-3.70	-3.70	13.71
31	123	113	116.17	-3.17	-3.17	10.06
32	124	121	116.64	4.36	4.36	18.99
33	125	110	117.11	-7.11	-7.11	50.59
34	125	117	117.11	-0.11	-0.11	0.01
35	125	118	117.11	0.89	0.89	0.79
36	127	125	118.05	6.95	6.95	48.27
37	127	109	118.05	-9.05	-9.05	81.95
38	127	120	118.05	1.95	1.95	3.79
39	127	120	118.05	1.95	1.95	3.79
40	127	121	118.05	2.95	2.95	8.69
41	127	121	118.05	2.95	2.95	8.69
42	128	111	118.52	-7.52	-7.52	56.59
43	128	115	118.52	-3.52	-3.52	12.41
44	129	119	118.99	0.01	0.01	0.00
Jumlah	5115	4972		0.11		1231.83

PERHITUNGAN RATA-RATA, VARIAN, SIMPANGAN BAKU
REGRESI $\hat{Y} = 58,36 + 0,47X$

$$\begin{aligned} 1. \text{ Rata-rata} &= \overline{Y - \hat{Y}} &= \frac{\sum(Y - \hat{Y})}{n} \\ & &= \frac{0.11}{44} \\ & &= \mathbf{0.00} \end{aligned}$$

$$\begin{aligned} 2. \text{ Varians} &= S^2 &= \frac{\sum\{(Y - \hat{Y}) - \overline{(Y - \hat{Y})}\}^2}{n - 1} \\ & &= \frac{1231.83}{43} \\ & &= \mathbf{28.65} \end{aligned}$$

$$\begin{aligned} 3. \text{ Simpangan Baku} &= S &= \sqrt{S^2} \\ & &= \sqrt{28.65} \\ & &= \mathbf{5.35} \end{aligned}$$

TABEL PERHITUNGAN NORMALITAS GALAT TAKSIRAN Y ATAS X

REGRESI $\hat{Y} = 58,36 + 0,47X$

No.	$(Y - \hat{Y})$ (X_i)	$\{(Y - \hat{Y}) - (Y - \hat{Y})\}$ ($X_i - X_i$)	Zi	Zt	F(zi)	S(zi)	F(zi) - S(zi)
1	-9.05	-9.05	-1.69	0.4545	0.0455	0.0227	0.0228
2	-7.52	-7.52	-1.41	0.4192	0.0808	0.0455	0.0353
3	-7.35	-7.35	-1.37	0.4147	0.0853	0.0682	0.0171
4	-7.24	-7.24	-1.35	0.4115	0.0885	0.0909	0.0024
5	-7.18	-7.18	-1.34	0.4099	0.0901	0.1136	0.0235
6	-7.11	-7.11	-1.33	0.4066	0.0934	0.1364	0.0430
7	-6.59	-6.59	-1.23	0.3907	0.1093	0.1591	0.0498
8	-6.29	-6.29	-1.18	0.3790	0.1210	0.1818	0.0608
9	-6.29	-6.29	-1.18	0.3790	0.1210	0.2045	0.0835
10	-5.36	-5.36	-1.00	0.3413	0.1587	0.2273	0.0686
11	-5.00	-5.00	-0.93	0.3238	0.1762	0.2500	0.0738
12	-4.94	-4.94	-0.92	0.3212	0.1788	0.2727	0.0939
13	-3.70	-3.70	-0.69	0.2549	0.2451	0.2955	0.0504
14	-3.52	-3.52	-0.66	0.2422	0.2578	0.3182	0.0604
15	-3.17	-3.17	-0.59	0.2224	0.2776	0.3409	0.0633
16	-2.89	-2.89	-0.54	0.2054	0.2946	0.3636	0.0690
17	-2.82	-2.82	-0.53	0.1985	0.3015	0.3864	0.0849
18	-1.88	-1.88	-0.35	0.1368	0.3632	0.4091	0.0459
19	-1.83	-1.83	-0.34	0.1331	0.3669	0.4318	0.0649
20	-1.59	-1.59	-0.30	0.1141	0.3859	0.4545	0.0686
21	-0.24	-0.24	-0.05	0.0160	0.4840	0.4773	0.0067
22	-0.11	-0.11	-0.02	0.0080	0.4920	0.5000	0.0080
23	0.01	0.01	0.00	0.0000	0.5000	0.5227	0.0227
24	0.24	0.24	0.04	0.0160	0.5160	0.5455	0.0295
25	0.89	0.89	0.17	0.0636	0.5636	0.5682	0.0046
26	1.95	1.95	0.36	0.1406	0.6406	0.5909	0.0497
27	1.95	1.95	0.36	0.1406	0.6406	0.6136	0.0270
28	2.95	2.95	0.55	0.2088	0.7088	0.6364	0.0724
29	2.95	2.95	0.55	0.2088	0.7088	0.6591	0.0497
30	3.41	3.41	0.64	0.2357	0.7357	0.6818	0.0539
31	3.59	3.59	0.67	0.2486	0.7486	0.7045	0.0441
32	3.70	3.70	0.69	0.2549	0.7549	0.7273	0.0276
33	4.36	4.36	0.81	0.2910	0.7910	0.7500	0.0410
34	4.82	4.82	0.90	0.3159	0.8159	0.7727	0.0432
35	5.77	5.77	1.08	0.3577	0.8577	0.7955	0.0622
36	5.88	5.88	1.10	0.3621	0.8621	0.8182	0.0439
37	6.23	6.23	1.16	0.3770	0.8770	0.8409	0.0361
38	6.53	6.53	1.22	0.3869	0.8869	0.8636	0.0233
39	6.65	6.65	1.24	0.3925	0.8925	0.8864	0.0061
40	6.94	6.94	1.30	0.4015	0.9015	0.9091	0.0076
41	6.95	6.95	1.30	0.4015	0.9015	0.9318	0.0303
42	8.18	8.18	1.53	0.4357	0.9357	0.9545	0.0188
43	8.77	8.77	1.64	0.4484	0.9484	0.9773	0.0289
44	9.06	9.06	1.69	0.4545	0.9545	1.0000	0.0455

Dari perhitungan, didapat nilai L_{hitung} terbesar = **0.0939**

L_{tabel} untuk $n = 44$ dengan taraf signifikan 0,05 adalah **0,1336**.

Hal ini berarti $L_{hitung} < L_{tabel}$.

Dengan demikian dapat disimpulkan data berdistribusi Normal.

LANGKAH PERHITUNGAN UJI NORMALITAS GALAT TAKSIRAN

$$\text{REGRESI } \hat{Y} = 58,36 + 0,47X$$

Disertai contoh perhitungan untuk no. 1 (pada tabel normalitas)

1. Kolom $Y - \hat{Y} = (X_i)$

Data diurutkan dari data yang terkecil sampai yang terbesar

2. Kolom $(Y - \hat{Y}) - \overline{(Y - \hat{Y})} = (X_i - X_i)$

Mengikuti kolom $Y - \hat{Y}$

3. Kolom Z_i

$$Z_i = \frac{\{(Y - \hat{Y}) - \overline{(Y - \hat{Y})}\}}{S} = \frac{-9.05}{5.35} = -1.69$$

4. Kolom Z_t

Dari kolom Z_i kemudian dikonsultasikan tabel distribusi Z contoh :– 1.69;
pada sumbu menurun cari angka 1,6; lalu pada sumbu mendatar angka 9
Maka diperoleh nilai $Z_t = 0.4545$

5. Kolom $F(z_i) = P(Z \leq Z_i)$

Jika Z_i negatif, maka $F(z_i) = 0,5 - Z_t$

Jika Z_i positif, maka $F(Z_i) = 0,5 + Z_t$

Karena $Z_i = -1,69$, maka $F(z_i) = 0,5 - Z_t = 0,5 - 0,4545 = 0.0455$

6. Kolom $S(z_i)$

$$S(z_i) = \frac{\text{Nomor Responder}}{\text{Jumlah Responde}} = \frac{1}{44} = 0.0227$$

7. Kolom $|F(z_i) - S(Z_i)|$

Nilai mutlak antara $F(z_i) - S(z_i)$

$$= |0.0455 - 0.0227| = 0.0228$$

TABEL PERHITUNGAN UJI KLINEARAN REGRESI

No.	K	n	X	Y	Y ²	XY	ΣY ²	(ΣY)	(ΣY) ²	$\frac{(\Sigma Y)^2}{nK}$	$\Sigma Y^2 - \frac{(\Sigma Y)^2}{nK}$
1	I	1	99	102	10404	10098					
2	II	1	100	100	10000	10000					
3	III	1	101	104	10816	10504					
4	IV	1	102	110	12100	11220					
5	V	1	103	113	12769	11639					
6	VI	2	104	100	10000	10400	21449	207	42849	21,424.50	24.50
7			104	107	11449	11128					
8	VII	2	106	101	10201	10706	22970	214	45796	22,898.00	72.00
9			106	113	12769	11978					
10	VIII	1	108	115	13225	12420					
11	IX	3	109	103	10609	11227	35042	324	104976	34,992.00	50.00
12			109	113	12769	12317					
13			109	108	11664	11772					
14	X	1	110	117	13689	12870					
15	XI	1	112	106	11236	11872					
16	XII	1	113	118	13924	13334					
17	XIII	2	114	107	11449	12198	26090	228	51984	25,992.00	98.00
18			114	121	14641	13794					
19	XIV	1	115	116	13456	13340					
20	XV	1	116	111	12321	12876					
21	XVI	2	117	106	11236	12402	25636	226	51076	25,538.00	98.00
22			117	120	14400	14040					
23	XVII	2	118	111	12321	13098	27205	233	54289	27,144.50	60.50
24			118	122	14884	14396					
25	XVIII	2	119	108	11664	12852	23328	216	46656	23,328.00	0.00
26			119	108	11664	12852					
27	XIX	1	120	115	13225	13800					
28	XX	2	121	124	15376	15004	30017	245	60025	30,012.50	4.50
29			121	121	14641	14641					
30	XXI	1	122	112	12544	13664					
31	XXII	1	123	113	12769	13899					
32	XXIII	1	124	121	14641	15004					
33	XXIV	3	125	110	12100	13750	39713	345	119025	39,675.00	38.00
34			125	117	13689	14625					
35			125	118	13924	14750					
36	XXV	6	127	125	15625	15875	85588	716	512656	85,442.67	145.33
37			127	109	11881	13843					
38			127	120	14400	15240					
39			127	120	14400	15240					
40			127	121	14641	15367					
41			127	121	14641	15367					
42	XXVI	2	128	111	12321	14208	25546	226	51076	25,538.00	8.00
43			128	115	13225	14720					
44	XXVII	1	129	119	14161	15351					
Σ	27	44	5115	4972	563864	579681					598.83

PERHITUNGAN UJI KEBERARTIAN REGRESI

1. Mencari Jumlah Kuadrat Total JK (T)

$$\begin{aligned} JK(T) &= \sum Y^2 \\ &= \mathbf{563864} \end{aligned}$$

2. Mencari jumlah kuadrat regresi a JK (a)

$$\begin{aligned} JK(a) &= \frac{(\sum Y)^2}{n} \\ &= \frac{4972^2}{44} \\ &= \mathbf{561836} \end{aligned}$$

3. Mencari jumlah kuadrat regresi b JK (b/a)

$$\begin{aligned} JK(b/a) &= b \cdot \sum xy \\ &= 0.47 \times 1686 \\ &= \mathbf{796.42} \end{aligned}$$

4. Mencari jumlah kuadrat residu JK (S)

$$\begin{aligned} JK(S) &= JK(T) - JK(a) - JK(b/a) \\ &= 563864 - 561836 - 796.42 \\ &= \mathbf{1231.58} \end{aligned}$$

5. Mencari Derajat Kebebasan

$$\begin{aligned} dk_{(T)} &= n = 44 \\ dk(a) &= 1 \\ dk(b/a) &= 1 \\ dk_{(res)} &= n - 2 = 42 \end{aligned}$$

6. Mencari Rata-rata Jumlah Kuadrat

$$\begin{aligned} RJK_{(b/a)} &= \frac{JK_{(b/a)}}{dk_{(b/a)}} = \frac{796.420}{1} = \mathbf{796.42} \\ RJK_{(res)} &= \frac{JK_{(res)}}{dk_{(res)}} = \frac{1231.58}{42} = \mathbf{29.32} \end{aligned}$$

7. Kriteria Pengujian

Tolak H_0 jika $F_{hitung} > F_{tabel}$, maka regresi berarti

Terima H_0 jika $F_{hitung} > F_{tabel}$ maka regresi tidak berarti

8. Pengujian

$$F_{hitung} = \frac{RJK_{(b/a)}}{RJK_{(res)}} = \frac{796.42}{29.32} = \mathbf{27.16}$$

9. Kesimpulan

Berdasarkan hasil perhitungan $F_{hitung} = \mathbf{27.16}$

Berdasarkan taraf signifikan 0.05, pada tabel distribusi F dengan menggunakan dk pembilang 1 dan dk penyebut $n-2 = 44-2 = 42$ dihasilkan F_{tabel} sebesar = 4.07

sehingga $F_{hitung} > F_{tabel}$ maka dapat disimpulkan bahwa model persamaan

regresi adalah signifikan

PERHITUNGAN UJI KELINIERAN REGRESI

1. Mencari Jumlah Kuadrat Error JK (G)

$$\begin{aligned} \text{JK (G)} &= \sum \left\{ \Sigma Y_k^2 - \frac{\Sigma Y_k^2}{n_k} \right\} \\ &= \mathbf{598.83} \text{ (Lihat tabel Perhitungan JK } G_{(\text{galat})}) \end{aligned}$$

2. Mencari Jumlah Kuadrat Tuna cocok JK (TC)

$$\begin{aligned} \text{JK (TC)} &= \text{JK (S)} - \text{JK(G)} \\ &= 1231.58 - 598.83 \\ &= \mathbf{632.75} \end{aligned}$$

3. Mencari Derajat Kebebasan

$$\begin{aligned} k &= 27 \\ dk_{(\text{TC})} &= k - 2 = 25 \\ dk_{(\text{G})} &= n - k = 17 \end{aligned}$$

4. Mencari rata-rata jumlah kuadrat

$$\begin{aligned} \text{RJK}_{(\text{TC})} &= \frac{632.75}{25} = 25.31 \\ \text{RJK}_{(\text{G})} &= \frac{598.83}{17} = 35.23 \end{aligned}$$

5. Kriteria Pengujian

Terima H_0 jika $F_{\text{hitung}} < F_{\text{tabel}}$, maka regresi linier

Tolak H_0 jika $F_{\text{hitung}} > F_{\text{tabel}}$, maka regresi tidak linier

6. Pengujian

$$F_{\text{hitung}} = \frac{\text{RJK}_{(\text{TC})}}{\text{RJK}_{(\text{G})}} = \frac{25.31}{35.23} = \mathbf{0.72}$$

7. Kesimpulan

Berdasarkan hasil perhitungan $F_{\text{hitung}} = \mathbf{0.72}$

Berdasarkan taraf signifikan 0,05, pada tabel distribusi F dengan menggunakan dk pembilang 25 dan dk penyebut 17 dihasilkan tabel sebesar = 2.19 sehingga $F_{\text{hitung}} < F_{\text{tabel}}$ maka dapat disimpulkan bahwa model persamaan regresi adalah linier

TABEL ANAVA UNTUK UJI KEBERARTIAN DAN UJI KELINIERAN REGRESI

Sumber Varians	dk	Jumlah Kuadrat (JK)	Rata-rata Jumlah Kuadrat (RJK)	F_{hitung}	F_{tabel}
Total	n	$\sum Y^2$	-	-	-
Regresi (a)	1	$\frac{(\sum Y)^2}{n}$	-	-	-
Regresi (b/a)	1	$b \cdot \sum xy$	$\frac{b \cdot \sum xy}{1}$	$\frac{RJK(b/a)}{RJK(S)}$ **)	$\frac{F(1 - \alpha)}{(1, n - 2)}$
Residu	n - 2	JK (S)	$\frac{JK(S)}{n-2}$		
Tuna Cocok	k - 2	JK (TC)	$\frac{JK(TC)}{k-2}$	$\frac{RJK(TC)}{RJK(G)}$ ns)	$\frac{F(1 - \alpha)}{(k - 2, n - k)}$
Galat Kekeliruan	n - k	JK (G)	$\frac{JK(G)}{n - k}$		

Keterangan : **) Persamaan regresi berarti jika $F_{hitung} > F_{tabel}$
 ns) Persamaan regresi linear jika $F_{hitung} < F_{tabel}$

Sumber Varians	dk	Jumlah Kuadrat (JK)	Rata-rata Jumlah Kuadrat (RJK)	F_{hitung}	F_{tabel}
Total	44	563864			
Regresi (a)	1	561836			
Regresi (b/a)	1	796.42	796.42	27.16 **)	4.07
Residu	42	1231.81	29.32		
Tuna Cocok	25	632.75	25.31	0.72 ns)	2.19
Galat Kekeliruan	17	598.83	35.23		

Keterangan : **) Persamaan regresi berarti karena $F_{hitung} (27.16) > F_{tabel} (4.07)$
 ns) Persamaan regresi linear karena $F_{hitung} (0.72) < F_{tabel} (2.19)$

PERHITUNGAN KOEFISIEN KORELASI PRODUCT MOMENT

Mencari Koefisien Korelasi dengan Rumus Product Moment

Diketahui :

$$\sum x^2 = 3570.25$$

$$\sum y^2 = 2028$$

$$\sum xy = 1686$$

$$r_{xy} = \frac{\sum xy}{\sqrt{(\sum x^2) \cdot (\sum y^2)}}$$

$$r_{xy} = \frac{1686}{\sqrt{3570.25 \times 2028}}$$

$$r_{xy} = \frac{1686}{2690.81}$$

$$r_{xy} = 0.627$$

Kesimpulan :

Pada perhitungan product moment di atas diperoleh $r_{hitung}(r_{xy}) = 0.627$

Dengan demikian dapat disimpulkan bahwa terdapat hubungan yang positif antara variabel X terhadap variabel Y.

PERHITUNGAN UJI KEBERARTIAN KOEFISIEN KORELASI (Uji-t)

Koefisien Korelasi Product Moment (Uji-t)

$$t_h = \frac{r \sqrt{n-2}}{\sqrt{1-r^2}}$$

$$t_h = \frac{0.627 \sqrt{42}}{\sqrt{1-0.393}}$$

$$t_h = \frac{0.627 \times 6.481}{\sqrt{0.607}}$$

$$t_h = \frac{4.063}{0.779}$$

$$t_h = 5.216$$

t_{tabel} pada taraf signifikansi 0,05 dengan dk = (n-2) = (44 - 2) = 42 sebesar **1,684**

Kriteria pengujian :

H_0 ditolak jika $t_{\text{hitung}} > t_{\text{tabel}}$

H_0 diterima jika $t_{\text{hitung}} < t_{\text{tabel}}$

Dari hasil pengujian :

t_{hitung} (**5.216**) $>$ t_{tabel} (**1.684**), maka terdapat hubungan positif yang signifikan antara variabel X dengan variabel Y

PERHITUNGAN KOEFISIEN DETERMINASI

Untuk mencari seberapa besar variasi variabel Y yang ditentukan oleh variabel X, maka digunakan Uji Koefisien Determinasi dengan rumus :

$$\begin{aligned} \text{KD} &= r_{xy}^2 \\ &= 0.627^2 \\ &= \mathbf{0.3931} \end{aligned}$$

Jika Koefisien Determinasi di persentasekan, maka hasilnya :

$$0.3931 \times 100\% = \mathbf{39.31\%}$$

Dari hasil tersebut diinterpretasikan bahwa kepercayaan konsumen ditentukan oleh citra merek sebesar 39,31%.

ka