

Appendix 3 Pilot Test Result

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	X
1	4	4	5	5	5	5	4	4	5	4	4	5	4	5	5	68
2	2	2	4	4	4	4	2	2	3	2	4	3	2	3	3	44
3	2	2	4	2	2	3	2	2	2	2	4	3	2	2	2	36
4	1	2	4	2	4	4	4	3	1	4	2	3	2	4	4	44
5	2	2	4	4	4	4	2	4	2	4	4	5	4	4	5	54
6	5	4	4	4	3	5	4	4	3	3	4	4	2	5	5	59
7	4	4	4	4	4	5	4	5	3	2	4	3	2	4	4	56
8	1	3	4	4	2	5	4	3	3	2	4	4	2	4	2	47
9	1	2	3	4	2	5	2	3	2	2	2	3	2	4	2	39
10	2	2	4	4	1	4	2	2	3	2	2	3	2	3	2	38
11	2	2	4	5	2	4	4	4	4	5	4	5	2	5	3	55
12	2	5	5	4	4	5	4	4	4	5	4	4	2	4	4	60
13	2	4	4	4	3	3	2	4	3	4	4	5	2	4	4	52
14	2	2	3	4	2	5	2	2	4	2	3	2	3	2	2	40
15	2	2	5	4	2	4	4	2	4	2	2	3	2	4	2	44
16	2	1	5	3	2	4	2	4	3	2	2	5	4	5	5	49
17	4	4	4	5	3	5	4	4	4	4	4	5	4	5	5	64
18	2	5	4	3	2	4	4	3	2	2	2	3	2	4	2	44
19	2	2	4	4	3	5	2	4	3	4	4	2	2	4	4	49
20	4	2	5	5	4	4	2	5	4	5	5	5	4	5	4	63
21	4	4	4	5	4	4	2	5	4	5	4	5	4	5	4	63
22	2	5	5	5	4	5	4	4	4	4	2	4	3	4	2	57
23	2	4	5	4	3	5	5	4	3	4	4	5	4	3	2	57
24	2	2	3	4	2	4	2	2	4	2	2	4	3	4	4	44
25	3	2	4	3	3	4	4	5	2	2	2	3	3	5	4	49
26	4	2	4	4	3	5	5	5	3	5	4	5	4	5	4	62
27	3	4	5	4	3	5	3	4	4	2	4	2	3	5	5	56
28	2	4	4	4	3	4	4	3	3	4	4	4	3	4	5	55
29	4	2	5	4	4	4	4	4	3	5	4	4	3	5	4	59
30	2	5	4	4	3	4	4	4	4	5	2	5	3	5	4	58
31	1	1	3	4	3	3	3	5	2	5	3	5	3	4	4	49
32	3	4	4	4	4	4	4	4	4	4	4	5	4	5	4	61
33	3	4	5	4	4	4	5	5	4	3	3	4	2	4	4	58
34	3	4	4	4	3	4	4	5	5	4	3	4	2	4	4	57
35	4	5	4	4	4	5	5	5	3	4	2	5	3	5	4	62
Y	90	108	146	139	108	151	118	132	114	120	115	139	98	147	127	1852

Appendix 3 Pilot Test Result

Validity Test Step 1:

no.1	X	Y	X ²	Y ²	XY
1	4	90	16	8100	360
2	4	108	16	11664	432
3	5	146	25	21316	730
4	5	139	25	19321	695
5	5	108	25	11664	540
6	5	151	25	22801	755
7	4	118	16	13924	472
8	4	132	16	17424	528
9	5	114	25	12996	570
10	4	120	16	14400	480
11	4	115	16	13225	460
12	5	139	25	19321	695
13	4	98	16	9604	392
14	5	147	25	21609	735
15	5	127	25	16129	635
jml	68	1852	312	233498	8479
0.62					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.62$$

no.3	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	4	146	16	21316	584
4	2	139	4	19321	278
5	2	108	4	11664	216
6	3	151	9	22801	453
7	2	118	4	13924	236
8	2	132	4	17424	264
9	2	114	4	12996	228
10	2	120	4	14400	240
11	4	115	16	13225	460
12	3	139	9	19321	417
13	2	98	4	9604	196
14	2	147	4	21609	294
15	2	127	4	16129	254
jml	36	1852	94	233498	4516
0.37					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.37$$

no.2	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	4	146	16	21316	584
4	4	139	16	19321	556
5	4	108	16	11664	432
6	4	151	16	22801	604
7	2	118	4	13924	236
8	2	132	4	17424	264
9	3	114	9	12996	342
10	2	120	4	14400	240
11	4	115	16	13225	460
12	3	139	9	19321	417
13	2	98	4	9604	196
14	3	147	9	21609	441
15	3	127	9	16129	381
jml	44	1852	140	233498	5549
0.51					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.51$$

no.4	X	Y	X ²	Y ²	XY
1	1	90	1	8100	90
2	2	108	4	11664	216
3	4	146	16	21316	584
4	2	139	4	19321	278
5	4	108	16	11664	432
6	4	151	16	22801	604
7	4	118	16	13924	472
8	3	132	9	17424	396
9	1	114	1	12996	114
10	4	120	16	14400	480
11	2	115	4	13225	230
12	3	139	9	19321	417
13	2	98	4	9604	196
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	44	1852	148	233498	5605
0.57					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.57$$

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no.5	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	4	146	16	21316	584
4	4	139	16	19321	556
5	4	108	16	11664	432
6	4	151	16	22801	604
7	2	118	4	13924	236
8	4	132	16	17424	528
9	2	114	4	12996	228
10	4	120	16	14400	480
11	4	115	16	13225	460
12	5	139	25	19321	695
13	4	98	16	9604	392
14	4	147	16	21609	588
15	5	127	25	16129	635
jml	54	1852	210	233498	6814
0.53					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.53$$

no.6	X	Y	X ²	Y ²	XY
1	5	90	25	8100	450
2	4	108	16	11664	432
3	4	146	16	21316	584
4	4	139	16	19321	556
5	3	108	9	11664	324
6	5	151	25	22801	755
7	4	118	16	13924	472
8	4	132	16	17424	528
9	3	114	9	12996	342
10	3	120	9	14400	360
11	4	115	16	13225	460
12	4	139	16	19321	556
13	2	98	4	9604	196
14	5	147	25	21609	735
15	5	127	25	16129	635
jml	59	1852	243	233498	7385
0.44					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.44$$

no.7	X	Y	X ²	Y ²	XY
1	4	90	16	8100	360
2	4	108	16	11664	432
3	4	146	16	21316	584
4	4	139	16	19321	556
5	4	108	16	11664	432
6	5	151	25	22801	755
7	4	118	16	13924	472
8	5	132	25	17424	660
9	3	114	9	12996	342
10	2	120	4	14400	240
11	4	115	16	13225	460
12	3	139	9	19321	417
13	2	98	4	9604	196
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	56	1852	220	233498	7002
0.38					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.38$$

no.8	X	Y	X ²	Y ²	XY
1	1	90	1	8100	90
2	3	108	9	11664	324
3	4	146	16	21316	584
4	4	139	16	19321	556
5	2	108	4	11664	216
6	5	151	25	22801	755
7	4	118	16	13924	472
8	3	132	9	17424	396
9	3	114	9	12996	342
10	2	120	4	14400	240
11	4	115	16	13225	460
12	4	139	16	19321	556
13	2	98	4	9604	196
14	4	147	16	21609	588
15	2	127	4	16129	254
jml	47	1852	165	233498	6029
0.77					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.77$$

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no.9	X	Y	X ²	Y ²	XY
1	1	90	1	8100	90
2	2	108	4	11664	216
3	3	146	9	21316	438
4	4	139	16	19321	556
5	2	108	4	11664	216
6	5	151	25	22801	755
7	2	118	4	13924	236
8	3	132	9	17424	396
9	2	114	4	12996	228
10	2	120	4	14400	240
11	2	115	4	13225	230
12	3	139	9	19321	417
13	2	98	4	9604	196
14	4	147	16	21609	588
15	2	127	4	16129	254
jml	39	1852	117	233498	5056
0.88					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.88$$

no.10	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	4	146	16	21316	584
4	4	139	16	19321	556
5	1	108	1	11664	108
6	4	151	16	22801	604
7	2	118	4	13924	236
8	2	132	4	17424	264
9	3	114	9	12996	342
10	2	120	4	14400	240
11	2	115	4	13225	230
12	3	139	9	19321	417
13	2	98	4	9604	196
14	3	147	9	21609	441
15	2	127	4	16129	254
jml	38	1852	108	233498	4868
0.74					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.74$$

no.11	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	4	146	16	21316	584
4	5	139	25	19321	695
5	2	108	4	11664	216
6	4	151	16	22801	604
7	4	118	16	13924	472
8	4	132	16	17424	528
9	4	114	16	12996	456
10	5	120	25	14400	600
11	4	115	16	13225	460
12	5	139	25	19321	695
13	2	98	4	9604	196
14	5	147	25	21609	735
15	3	127	9	16129	381
jml	55	1852	221	233498	7018
0.74					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.74$$

no.12	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	5	108	25	11664	540
3	5	146	25	21316	730
4	4	139	16	19321	556
5	4	108	16	11664	432
6	5	151	25	22801	755
7	4	118	16	13924	472
8	4	132	16	17424	528
9	4	114	16	12996	456
10	5	120	25	14400	600
11	4	115	16	13225	460
12	4	139	16	19321	556
13	2	98	4	9604	196
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	60	1852	252	233498	7557
0.62					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.62$$

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no.13	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	4	108	16	11664	432
3	4	146	16	21316	584
4	4	139	16	19321	556
5	3	108	9	11664	324
6	3	151	9	22801	453
7	2	118	4	13924	236
8	4	132	16	17424	528
9	3	114	9	12996	342
10	4	120	16	14400	480
11	4	115	16	13225	460
12	5	139	25	19321	695
13	2	98	4	9604	196
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	52	1852	192	233498	6562
0.59					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.59$$

no.14	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	3	146	9	21316	438
4	4	139	16	19321	556
5	2	108	4	11664	216
6	5	151	25	22801	755
7	2	118	4	13924	236
8	2	132	4	17424	264
9	4	114	16	12996	456
10	2	120	4	14400	240
11	3	115	9	13225	345
12	2	139	4	19321	278
13	3	98	9	9604	294
14	2	147	4	21609	294
15	2	127	4	16129	254
jml	40	1852	120	233498	5022
0.33					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.33$$

no.15	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	5	146	25	21316	730
4	4	139	16	19321	556
5	2	108	4	11664	216
6	4	151	16	22801	604
7	4	118	16	13924	472
8	2	132	4	17424	264
9	4	114	16	12996	456
10	2	120	4	14400	240
11	2	115	4	13225	230
12	3	139	9	19321	417
13	2	98	4	9604	196
14	4	147	16	21609	588
15	2	127	4	16129	254
jml	44	1852	146	233498	5619
0.65					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.65$$

no.16	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	1	108	1	11664	108
3	5	146	25	21316	730
4	3	139	9	19321	417
5	2	108	4	11664	216
6	4	151	16	22801	604
7	2	118	4	13924	236
8	4	132	16	17424	528
9	3	114	9	12996	342
10	2	120	4	14400	240
11	2	115	4	13225	230
12	5	139	25	19321	695
13	4	98	16	9604	392
14	5	147	25	21609	735
15	5	127	25	16129	635
jml	49	1852	187	233498	6288
0.66					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.66$$

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no.17	X	Y	X ²	Y ²	XY
1	4	90	16	8100	360
2	4	108	16	11664	432
3	4	146	16	21316	584
4	5	139	25	19321	695
5	3	108	9	11664	324
6	5	151	25	22801	755
7	4	118	16	13924	472
8	4	132	16	17424	528
9	4	114	16	12996	456
10	4	120	16	14400	480
11	4	115	16	13225	460
12	5	139	25	19321	695
13	4	98	16	9604	392
14	5	147	25	21609	735
15	5	127	25	16129	635
jml	64	1852	278	233498	8003
0.65					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.65$$

no.18	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	5	108	25	11664	540
3	4	146	16	21316	584
4	3	139	9	19321	417
5	2	108	4	11664	216
6	4	151	16	22801	604
7	4	118	16	13924	472
8	3	132	9	17424	396
9	2	114	4	12996	228
10	2	120	4	14400	240
11	2	115	4	13225	230
12	3	139	9	19321	417
13	2	98	4	9604	196
14	4	147	16	21609	588
15	2	127	4	16129	254
jml	44	1852	144	233498	5562
0.48					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.48$$

no.19	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	4	146	16	21316	584
4	4	139	16	19321	556
5	3	108	9	11664	324
6	5	151	25	22801	755
7	2	118	4	13924	236
8	4	132	16	17424	528
9	3	114	9	12996	342
10	4	120	16	14400	480
11	4	115	16	13225	460
12	2	139	4	19321	278
13	2	98	4	9604	196
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	49	1852	175	233498	6231
0.67					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.67$$

no.20	X	Y	X ²	Y ²	XY
1	4	90	16	8100	360
2	2	108	4	11664	216
3	5	146	25	21316	730
4	5	139	25	19321	695
5	4	108	16	11664	432
6	4	151	16	22801	604
7	2	118	4	13924	236
8	5	132	25	17424	660
9	4	114	16	12996	456
10	5	120	25	14400	600
11	5	115	25	13225	575
12	5	139	25	19321	695
13	4	98	16	9604	392
14	5	147	25	21609	735
15	4	127	16	16129	508
jml	63	1852	279	233498	7894
0.44					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.44$$

Appendix 3 Pilot Test Result

no.21	X	Y	X ²	Y ²	XY
1	4	90	16	8100	360
2	4	108	16	11664	432
3	4	146	16	21316	584
4	5	139	25	19321	695
5	4	108	16	11664	432
6	4	151	16	22801	604
7	2	118	4	13924	236
8	5	132	25	17424	660
9	4	114	16	12996	456
10	5	120	25	14400	600
11	4	115	16	13225	460
12	5	139	25	19321	695
13	4	98	16	9604	392
14	5	147	25	21609	735
15	4	127	16	16129	508
jml	63	1852	273	233498	7849
0.35					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.35$$

no.22	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	5	108	25	11664	540
3	5	146	25	21316	730
4	5	139	25	19321	695
5	4	108	16	11664	432
6	5	151	25	22801	755
7	4	118	16	13924	472
8	4	132	16	17424	528
9	4	114	16	12996	456
10	4	120	16	14400	480
11	2	115	4	13225	230
12	4	139	16	19321	556
13	3	98	9	9604	294
14	4	147	16	21609	588
15	2	127	4	16129	254
jml	57	1852	233	233498	7190
0.54					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.54$$

no.23	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	4	108	16	11664	432
3	5	146	25	21316	730
4	4	139	16	19321	556
5	3	108	9	11664	324
6	5	151	25	22801	755
7	5	118	25	13924	590
8	4	132	16	17424	528
9	3	114	9	12996	342
10	4	120	16	14400	480
11	4	115	16	13225	460
12	5	139	25	19321	695
13	4	98	16	9604	392
14	3	147	9	21609	441
15	2	127	4	16129	254
jml	57	1852	231	233498	7159
0.46					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.46$$

no.24	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	2	108	4	11664	216
3	3	146	9	21316	438
4	4	139	16	19321	556
5	2	108	4	11664	216
6	4	151	16	22801	604
7	2	118	4	13924	236
8	2	132	4	17424	264
9	4	114	16	12996	456
10	2	120	4	14400	240
11	2	115	4	13225	230
12	4	139	16	19321	556
13	3	98	9	9604	294
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	44	1852	142	233498	5582
0.6					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.6$$

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no.25	X	Y	X ²	Y ²	XY
1	3	90	9	8100	270
2	2	108	4	11664	216
3	4	146	16	21316	584
4	3	139	9	19321	417
5	3	108	9	11664	324
6	4	151	16	22801	604
7	4	118	16	13924	472
8	5	132	25	17424	660
9	2	114	4	12996	228
10	2	120	4	14400	240
11	2	115	4	13225	230
12	3	139	9	19321	417
13	3	98	9	9604	294
14	5	147	25	21609	735
15	4	127	16	16129	508
jml	49	1852	175	233498	6199
0.55					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.55$$

no.26	X	Y	X ²	Y ²	XY
1	4	90	16	8100	360
2	2	108	4	11664	216
3	4	146	16	21316	584
4	4	139	16	19321	556
5	3	108	9	11664	324
6	5	151	25	22801	755
7	5	118	25	13924	590
8	5	132	25	17424	660
9	3	114	9	12996	342
10	5	120	25	14400	600
11	4	115	16	13225	460
12	5	139	25	19321	695
13	4	98	16	9604	392
14	5	147	25	21609	735
15	4	127	16	16129	508
jml	62	1852	268	233498	7777
0.51					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.51$$

no.27	X	Y	X ²	Y ²	XY
1	3	90	9	8100	270
2	4	108	16	11664	432
3	5	146	25	21316	730
4	4	139	16	19321	556
5	3	108	9	11664	324
6	5	151	25	22801	755
7	3	118	9	13924	354
8	4	132	16	17424	528
9	4	114	16	12996	456
10	2	120	4	14400	240
11	4	115	16	13225	460
12	2	139	4	19321	278
13	3	98	9	9604	294
14	5	147	25	21609	735
15	5	127	25	16129	635
jml	56	1852	224	233498	7047
0.49					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.49$$

no.28	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	4	108	16	11664	432
3	4	146	16	21316	584
4	4	139	16	19321	556
5	3	108	9	11664	324
6	4	151	16	22801	604
7	4	118	16	13924	472
8	3	132	9	17424	396
9	3	114	9	12996	342
10	4	120	16	14400	480
11	4	115	16	13225	460
12	4	139	16	19321	556
13	3	98	9	9604	294
14	4	147	16	21609	588
15	5	127	25	16129	635
jml	55	1852	209	233498	6903
0.6					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X) \cdot (\sum Y)}{\sqrt{\{n \cdot \sum X^2 - (\sum X)^2\} \cdot \{n \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.6$$

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no.29	X	Y	X ²	Y ²	XY
1	4	90	16	8100	360
2	2	108	4	11664	216
3	5	146	25	21316	730
4	4	139	16	19321	556
5	4	108	16	11664	432
6	4	151	16	22801	604
7	4	118	16	13924	472
8	4	132	16	17424	528
9	3	114	9	12996	342
10	5	120	25	14400	600
11	4	115	16	13225	460
12	4	139	16	19321	556
13	3	98	9	9604	294
14	5	147	25	21609	735
15	4	127	16	16129	508
jml	59	1852	241	233498	7393
0.52					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.52$$

no.30	X	Y	X ²	Y ²	XY
1	2	90	4	8100	180
2	5	108	25	11664	540
3	4	146	16	21316	584
4	4	139	16	19321	556
5	3	108	9	11664	324
6	4	151	16	22801	604
7	4	118	16	13924	472
8	4	132	16	17424	528
9	4	114	16	12996	456
10	5	120	25	14400	600
11	2	115	4	13225	230
12	5	139	25	19321	695
13	3	98	9	9604	294
14	5	147	25	21609	735
15	4	127	16	16129	508
jml	58	1852	238	233498	7306
0.56					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.56$$

no.31	X	Y	X ²	Y ²	XY
1	1	90	1	8100	90
2	1	108	1	11664	108
3	3	146	9	21316	438
4	4	139	16	19321	556
5	3	108	9	11664	324
6	3	151	9	22801	453
7	3	118	9	13924	354
8	5	132	25	17424	660
9	2	114	4	12996	228
10	5	120	25	14400	600
11	3	115	9	13225	345
12	5	139	25	19321	695
13	3	98	9	9604	294
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	49	1852	183	233498	6241
0.57					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.57$$

no.32	X	Y	X ²	Y ²	XY
1	3	90	9	8100	270
2	4	108	16	11664	432
3	4	146	16	21316	584
4	4	139	16	19321	556
5	4	108	16	11664	432
6	4	151	16	22801	604
7	4	118	16	13924	472
8	4	132	16	17424	528
9	4	114	16	12996	456
10	4	120	16	14400	480
11	4	115	16	13225	460
12	5	139	25	19321	695
13	4	98	16	9604	392
14	5	147	25	21609	735
15	4	127	16	16129	508
jml	61	1852	251	233498	7604
0.61					

Step 1:

$$r_{hitung} = \frac{n(\Sigma XY) - (\Sigma X) \cdot (\Sigma Y)}{\sqrt{\{n \cdot \Sigma X^2 - (\Sigma X)^2\} \cdot \{n \cdot \Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{hitung} = 0.61$$

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no.33	X	Y	X ²	Y ²	XY
1	3	90	9	8100	270
2	4	108	16	11664	432
3	5	146	25	21316	730
4	4	139	16	19321	556
5	4	108	16	11664	432
6	4	151	16	22801	604
7	5	118	25	13924	590
8	5	132	25	17424	660
9	4	114	16	12996	456
10	3	120	9	14400	360
11	3	115	9	13225	345
12	4	139	16	19321	556
13	2	98	4	9604	196
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	58	1852	234	233498	7283
0.56					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{\{n.\sum X^2 - (\sum X)^2\}.\{n.\sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.56$$

no.34	X	Y	X ²	Y ²	XY
1	3	90	9	8100	270
2	4	108	16	11664	432
3	4	146	16	21316	584
4	4	139	16	19321	556
5	3	108	9	11664	324
6	4	151	16	22801	604
7	4	118	16	13924	472
8	5	132	25	17424	660
9	5	114	25	12996	570
10	4	120	16	14400	480
11	3	115	9	13225	345
12	4	139	16	19321	556
13	2	98	4	9604	196
14	4	147	16	21609	588
15	4	127	16	16129	508
jml	57	1852	225	233498	7145
0.53					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{\{n.\sum X^2 - (\sum X)^2\}.\{n.\sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.53$$

no.35	X	Y	X ²	Y ²	XY
1	4	90	16	8100	360
2	5	108	25	11664	540
3	4	146	16	21316	584
4	4	139	16	19321	556
5	4	108	16	11664	432
6	5	151	25	22801	755
7	5	118	25	13924	590
8	5	132	25	17424	660
9	3	114	9	12996	342
10	4	120	16	14400	480
11	2	115	4	13225	230
12	5	139	25	19321	695
13	3	98	9	9604	294
14	5	147	25	21609	735
15	4	127	16	16129	508
jml	62	1852	268	233498	7761
0.45					

Step 1:

$$r_{hitung} = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{\{n.\sum X^2 - (\sum X)^2\}.\{n.\sum Y^2 - (\sum Y)^2\}}}$$

$$r_{hitung} = 0.45$$

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Validity Test Step 2:

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

- t_{hitung} of each statement in the questionnaire has been compared with distribution of $\alpha = 0,05$ in which $t_{tabel} = 1,771$

Note: if $t_{hitung} > t_{tabel}$ it means the statement is **valid**

if $t_{hitung} < t_{tabel}$ it means the statement is **invalid**

No.	Score of t_{hitung}	Score of t_{tabel}	Result
1.	$\frac{0,62 \times \sqrt{15-2}}{\sqrt{1-(0,62)^2}} = \frac{0,62 \times \sqrt{13}}{\sqrt{1-(0,62)^2}} = \frac{0,62 \times 3,605}{\sqrt{1-0,384}} = \frac{2,235}{0,76} = 2,829$	1,771	valid
2.	$\frac{0,51 \times \sqrt{15-2}}{\sqrt{1-(0,51)^2}} = \frac{0,51 \times \sqrt{13}}{\sqrt{1-(0,51)^2}} = \frac{0,51 \times 3,605}{\sqrt{1-0,26}} = \frac{1,839}{0,86} = 2,138$	1,771	valid
3.	$\frac{0,37 \times \sqrt{15-2}}{\sqrt{1-(0,37)^2}} = \frac{0,37 \times \sqrt{13}}{\sqrt{1-(0,37)^2}} = \frac{0,37 \times 3,605}{\sqrt{1-0,14}} = \frac{1,332}{0,93} = 1,43$	1,771	invalid
4.	$\frac{0,57 \times \sqrt{15-2}}{\sqrt{1-(0,57)^2}} = \frac{0,57 \times \sqrt{13}}{\sqrt{1-(0,57)^2}} = \frac{0,57 \times 3,605}{\sqrt{1-0,32}} = \frac{2,055}{0,82} = 2,506$	1,771	valid
5.	$\frac{0,53 \times \sqrt{15-2}}{\sqrt{1-(0,53)^2}} = \frac{0,53 \times \sqrt{13}}{\sqrt{1-(0,53)^2}} = \frac{0,53 \times 3,605}{\sqrt{1-0,281}} = \frac{1,911}{0,85} = 2,248$	1,771	valid
6.	$\frac{0,44 \times \sqrt{15-2}}{\sqrt{1-(0,44)^2}} = \frac{0,44 \times \sqrt{13}}{\sqrt{1-(0,44)^2}} = \frac{0,44 \times 3,605}{\sqrt{1-0,194}} = \frac{1,586}{0,891} = 1,782$	1,771	valid
7.	$\frac{0,38 \times \sqrt{15-2}}{\sqrt{1-(0,38)^2}} = \frac{0,38 \times \sqrt{13}}{\sqrt{1-(0,38)^2}} = \frac{0,38 \times 3,605}{\sqrt{1-0,14}} = \frac{1,369}{0,93} = 1,472$	1,771	invalid
8.	$\frac{0,77 \times \sqrt{15-2}}{\sqrt{1-(0,77)^2}} = \frac{0,77 \times \sqrt{13}}{\sqrt{1-(0,77)^2}} = \frac{0,77 \times 3,605}{\sqrt{1-0,59}} = \frac{2,776}{0,64} = 4,337$	1,771	valid
9.	$\frac{0,88 \times \sqrt{15-2}}{\sqrt{1-(0,88)^2}} = \frac{0,88 \times \sqrt{13}}{\sqrt{1-(0,88)^2}} = \frac{0,88 \times 3,605}{\sqrt{1-0,77}} = \frac{3,172}{0,48} = 6,608$	1,771	valid
10.	$\frac{0,74 \times \sqrt{15-2}}{\sqrt{1-(0,74)^2}} = \frac{0,74 \times \sqrt{13}}{\sqrt{1-(0,74)^2}} = \frac{0,74 \times 3,605}{\sqrt{1-0,55}} = \frac{2,668}{0,67} = 3,982$	1,771	valid
11.	$\frac{0,74 \times \sqrt{15-2}}{\sqrt{1-(0,74)^2}} = \frac{0,74 \times \sqrt{13}}{\sqrt{1-(0,74)^2}} = \frac{0,74 \times 3,605}{\sqrt{1-0,55}} = \frac{2,668}{0,67} = 3,982$	1,771	valid
12.	$\frac{0,62 \times \sqrt{15-2}}{\sqrt{1-(0,62)^2}} = \frac{0,62 \times \sqrt{13}}{\sqrt{1-(0,62)^2}} = \frac{0,62 \times 3,605}{\sqrt{1-0,384}} = \frac{2,235}{0,76} = 2,829$	1,771	valid
13.	$\frac{0,59 \times \sqrt{15-2}}{\sqrt{1-(0,59)^2}} = \frac{0,59 \times \sqrt{13}}{\sqrt{1-(0,59)^2}} = \frac{0,59 \times 3,605}{\sqrt{1-0,35}} = \frac{2,127}{0,81} = 2,626$	1,771	valid
14.	$\frac{0,33 \times \sqrt{15-2}}{\sqrt{1-(0,33)^2}} = \frac{0,33 \times \sqrt{13}}{\sqrt{1-(0,33)^2}} = \frac{0,33 \times 3,605}{\sqrt{1-0,11}} = \frac{1,189}{0,94} = 1,265$	1,771	invalid
15.	$\frac{0,65 \times \sqrt{15-2}}{\sqrt{1-(0,65)^2}} = \frac{0,65 \times \sqrt{13}}{\sqrt{1-(0,65)^2}} = \frac{0,65 \times 3,605}{\sqrt{1-0,42}} = \frac{2,343}{0,58} = 3,083$	1,771	valid
16.	$\frac{0,66 \times \sqrt{15-2}}{\sqrt{1-(0,66)^2}} = \frac{0,66 \times \sqrt{13}}{\sqrt{1-(0,66)^2}} = \frac{0,66 \times 3,605}{\sqrt{1-0,44}} = \frac{2,379}{0,75} = 3,172$	1,771	valid
17.	$\frac{0,65 \times \sqrt{15-2}}{\sqrt{1-(0,65)^2}} = \frac{0,65 \times \sqrt{13}}{\sqrt{1-(0,65)^2}} = \frac{0,65 \times 3,605}{\sqrt{1-0,42}} = \frac{2,343}{0,58} = 3,083$	1,771	valid

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18.	$\frac{0,48 \times \sqrt{15-2}}{\sqrt{1-(0,48)^2}} = \frac{0,48 \times \sqrt{13}}{\sqrt{1-(0,48)^2}} = \frac{0,48 \times 3,605}{\sqrt{1-0,77}} = \frac{1,730}{0,88} = 1,966$	1,771	valid
19.	$\frac{0,67 \times \sqrt{15-2}}{\sqrt{1-(0,67)^2}} = \frac{0,67 \times \sqrt{13}}{\sqrt{1-(0,67)^2}} = \frac{0,67 \times 3,605}{\sqrt{1-0,45}} = \frac{2,415}{0,74} = 3,263$	1,771	valid
20.	$\frac{0,44 \times \sqrt{15-2}}{\sqrt{1-(0,44)^2}} = \frac{0,44 \times \sqrt{13}}{\sqrt{1-(0,44)^2}} = \frac{0,44 \times 3,605}{\sqrt{1-0,194}} = \frac{1,586}{0,89} = 1,782$	1,771	valid
21.	$\frac{0,35 \times \sqrt{15-2}}{\sqrt{1-(0,35)^2}} = \frac{0,35 \times \sqrt{13}}{\sqrt{1-(0,35)^2}} = \frac{0,35 \times 3,605}{\sqrt{1-0,12}} = \frac{1,262}{0,94} = 1,342$	1,771	invalid
22.	$\frac{0,54 \times \sqrt{15-2}}{\sqrt{1-(0,54)^2}} = \frac{0,54 \times \sqrt{13}}{\sqrt{1-(0,54)^2}} = \frac{0,54 \times 3,605}{\sqrt{1-0,29}} = \frac{1,947}{0,84} = 2,318$	1,771	valid
23.	$\frac{0,46 \times \sqrt{15-2}}{\sqrt{1-(0,46)^2}} = \frac{0,46 \times \sqrt{13}}{\sqrt{1-(0,46)^2}} = \frac{0,46 \times 3,605}{\sqrt{1-0,21}} = \frac{1,658}{0,94} = 1,764$	1,771	valid
24.	$\frac{0,59 \times \sqrt{15-2}}{\sqrt{1-(0,59)^2}} = \frac{0,59 \times \sqrt{13}}{\sqrt{1-(0,59)^2}} = \frac{0,59 \times 3,605}{\sqrt{1-0,35}} = \frac{2,127}{0,81} = 2,626$	1,771	valid
25.	$\frac{0,55 \times \sqrt{15-2}}{\sqrt{1-(0,55)^2}} = \frac{0,55 \times \sqrt{13}}{\sqrt{1-(0,55)^2}} = \frac{0,55 \times 3,605}{\sqrt{1-0,3}} = \frac{1,983}{0,84} = 2,361$	1,771	valid
26.	$\frac{0,51 \times \sqrt{15-2}}{\sqrt{1-(0,51)^2}} = \frac{0,51 \times \sqrt{13}}{\sqrt{1-(0,51)^2}} = \frac{0,51 \times 3,605}{\sqrt{1-0,26}} = \frac{1,839}{0,86} = 2,138$	1,771	valid
27.	$\frac{0,49 \times \sqrt{15-2}}{\sqrt{1-(0,49)^2}} = \frac{0,49 \times \sqrt{13}}{\sqrt{1-(0,49)^2}} = \frac{0,49 \times 3,605}{\sqrt{1-0,24}} = \frac{1,766}{0,87} = 2,029$	1,771	valid
28.	$\frac{0,59 \times \sqrt{15-2}}{\sqrt{1-(0,59)^2}} = \frac{0,59 \times \sqrt{13}}{\sqrt{1-(0,59)^2}} = \frac{0,59 \times 3,605}{\sqrt{1-0,35}} = \frac{2,127}{0,81} = 2,626$	1,771	valid
29.	$\frac{0,52 \times \sqrt{15-2}}{\sqrt{1-(0,52)^2}} = \frac{0,52 \times \sqrt{13}}{\sqrt{1-(0,52)^2}} = \frac{0,52 \times 3,605}{\sqrt{1-0,27}} = \frac{1,875}{0,85} = 2,206$	1,771	valid
30.	$\frac{0,56 \times \sqrt{15-2}}{\sqrt{1-(0,56)^2}} = \frac{0,56 \times \sqrt{13}}{\sqrt{1-(0,56)^2}} = \frac{0,56 \times 3,605}{\sqrt{1-0,31}} = \frac{2,019}{0,83} = 2,432$	1,771	valid
31.	$\frac{0,57 \times \sqrt{15-2}}{\sqrt{1-(0,57)^2}} = \frac{0,57 \times \sqrt{13}}{\sqrt{1-(0,57)^2}} = \frac{0,57 \times 3,605}{\sqrt{1-0,32}} = \frac{2,055}{0,82} = 2,506$	1,771	valid
32.	$\frac{0,61 \times \sqrt{15-2}}{\sqrt{1-(0,61)^2}} = \frac{0,61 \times \sqrt{13}}{\sqrt{1-(0,61)^2}} = \frac{0,61 \times 3,605}{\sqrt{1-0,37}} = \frac{2,199}{0,79} = 2,783$	1,771	valid
33.	$\frac{0,56 \times \sqrt{15-2}}{\sqrt{1-(0,56)^2}} = \frac{0,56 \times \sqrt{13}}{\sqrt{1-(0,56)^2}} = \frac{0,56 \times 3,605}{\sqrt{1-0,31}} = \frac{2,019}{0,83} = 2,432$	1,771	valid
34.	$\frac{0,53 \times \sqrt{15-2}}{\sqrt{1-(0,53)^2}} = \frac{0,53 \times \sqrt{13}}{\sqrt{1-(0,53)^2}} = \frac{0,53 \times 3,605}{\sqrt{1-0,28}} = \frac{1,911}{0,85} = 2,248$	1,771	valid
35.	$\frac{0,45 \times \sqrt{15-2}}{\sqrt{1-(0,45)^2}} = \frac{0,45 \times \sqrt{13}}{\sqrt{1-(0,45)^2}} = \frac{0,45 \times 3,605}{\sqrt{1-0,20}} = \frac{1,622}{0,89} = 1,822$	1,771	valid

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Reliability Test Step 1:

$$S_1 = \frac{\sum X_1^2 - \frac{(\sum X_1)^2}{N}}{N}$$

No.	Score of S_n				
1.	$S_1 = 312 - \frac{(68)^2}{15}$	$312 - \frac{4624}{15}$	$= \frac{312 - 308,3}{15}$	$= \frac{3,7}{15}$	= 0,25
2.	$S_2 = 140 - \frac{(44)^2}{15}$	$140 - \frac{1936}{15}$	$= \frac{140 - 129,1}{15}$	$= \frac{10,9}{15}$	= 0,73
3.	$S_3 = 94 - \frac{(36)^2}{15}$	$94 - \frac{1296}{15}$	$= \frac{94 - 86,4}{15}$	$= \frac{7,6}{15}$	= 0,51
4.	$S_4 = 148 - \frac{(44)^2}{15}$	$148 - \frac{1936}{15}$	$= \frac{148 - 129,1}{15}$	$= \frac{18,9}{15}$	= 1,26
5.	$S_5 = 210 - \frac{(54)^2}{15}$	$210 - \frac{2916}{15}$	$= \frac{210 - 194,4}{15}$	$= \frac{15,6}{15}$	= 1,04
6.	$S_6 = 243 - \frac{(59)^2}{15}$	$243 - \frac{3481}{15}$	$= \frac{243 - 232,1}{15}$	$= \frac{10,9}{15}$	= 0,73
7.	$S_7 = 220 - \frac{(56)^2}{15}$	$220 - \frac{3136}{15}$	$= \frac{220 - 209,1}{15}$	$= \frac{10,9}{15}$	= 0,73
8.	$S_8 = 165 - \frac{(47)^2}{15}$	$165 - \frac{2209}{15}$	$= \frac{165 - 147,3}{15}$	$= \frac{17,7}{15}$	= 1,18
9.	$S_9 = 117 - \frac{(39)^2}{15}$	$117 - \frac{1521}{15}$	$= \frac{117 - 101,4}{15}$	$= \frac{15,6}{15}$	= 1,04
10.	$S_{10} = 108 - \frac{(38)^2}{15}$	$108 - \frac{1444}{15}$	$= \frac{108 - 96,3}{15}$	$= \frac{11,7}{15}$	= 0,78
11.	$S_{11} = 221 - \frac{(55)^2}{15}$	$221 - \frac{3025}{15}$	$= \frac{221 - 201,7}{15}$	$= \frac{19,3}{15}$	= 1,29
12.	$S_{12} = 252 - \frac{(60)^2}{15}$	$252 - \frac{3600}{15}$	$= \frac{252 - 240}{15}$	$= \frac{12}{15}$	= 0,8
13.	$S_{13} = 192 - \frac{(52)^2}{15}$	$192 - \frac{2704}{15}$	$= \frac{192 - 180,3}{15}$	$= \frac{11,7}{15}$	= 0,78
14.	$S_{14} = 120 - \frac{(40)^2}{15}$	$120 - \frac{1600}{15}$	$= \frac{120 - 106,7}{15}$	$= \frac{13,3}{15}$	= 0,89

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15.	$S_{15} = 146 - \frac{(44)^2}{15} = \frac{146 - 1936}{15} = \frac{146 - 129,1}{15} = \frac{16,9}{15} = 1,13$
16.	$S_{16} = 187 - \frac{(49)^2}{15} = \frac{187 - 2401}{15} = \frac{187 - 160,1}{15} = \frac{26,9}{15} = 1,79$
17.	$S_{17} = 278 - \frac{(64)^2}{15} = \frac{278 - 4096}{15} = \frac{278 - 273,1}{15} = \frac{4,9}{15} = 0,33$
18.	$S_{18} = 144 - \frac{(44)^2}{15} = \frac{144 - 1936}{15} = \frac{144 - 129,1}{15} = \frac{14,9}{15} = 0,99$
19.	$S_{19} = 175 - \frac{(49)^2}{15} = \frac{175 - 2401}{15} = \frac{175 - 160,1}{15} = \frac{14,9}{15} = 0,99$
20.	$S_{20} = 279 - \frac{(63)^2}{15} = \frac{279 - 3969}{15} = \frac{279 - 264,6}{15} = \frac{14,4}{15} = 0,96$
21.	$S_{21} = 273 - \frac{(63)^2}{15} = \frac{273 - 3969}{15} = \frac{273 - 264,6}{15} = \frac{8,4}{15} = 0,56$
22.	$S_{22} = 233 - \frac{(57)^2}{15} = \frac{233 - 3249}{15} = \frac{233 - 216,6}{15} = \frac{16,4}{15} = 1,09$
23.	$S_{23} = 231 - \frac{(57)^2}{15} = \frac{231 - 3249}{15} = \frac{231 - 216,6}{15} = \frac{14,4}{15} = 0,96$
24.	$S_{24} = 142 - \frac{(44)^2}{15} = \frac{142 - 1936}{15} = \frac{142 - 129,1}{15} = \frac{12,9}{15} = 0,86$
25.	$S_{25} = 175 - \frac{(49)^2}{15} = \frac{175 - 2401}{15} = \frac{175 - 160,1}{15} = \frac{14,9}{15} = 0,99$
26.	$S_{26} = 268 - \frac{(62)^2}{15} = \frac{268 - 3844}{15} = \frac{268 - 256,3}{15} = \frac{11,7}{15} = 0,78$
27.	$S_{27} = 224 - \frac{(56)^2}{15} = \frac{224 - 3136}{15} = \frac{224 - 209,1}{15} = \frac{14,9}{15} = 0,99$
28.	$S_{28} = 209 - \frac{(55)^2}{15} = \frac{209 - 3025}{15} = \frac{209 - 201,7}{15} = \frac{7,3}{15} = 0,49$
29.	$S_{29} = 241 - \frac{(59)^2}{15} = \frac{241 - 3481}{15} = \frac{241 - 232,1}{15} = \frac{8,9}{15} = 0,59$
30.	$S_{30} = 238 - \frac{(58)^2}{15} = \frac{238 - 3364}{15} = \frac{238 - 224,3}{15} = \frac{13,7}{15} = 0,91$

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31.	$S_{31} = \frac{183 - (49)^2}{15} = \frac{183 - 2401}{15} = \frac{183 - 160,1}{15} = \frac{22,9}{15} = \mathbf{1,53}$
32.	$S_{32} = \frac{251 - (61)^2}{15} = \frac{251 - 3721}{15} = \frac{251 - 248,1}{15} = \frac{2,9}{15} = \mathbf{0,19}$
33.	$S_{33} = \frac{234 - (58)^2}{15} = \frac{234 - 3364}{15} = \frac{234 - 224,3}{15} = \frac{9,7}{15} = \mathbf{0,65}$
34.	$S_{34} = \frac{225 - (57)^2}{15} = \frac{225 - 3249}{15} = \frac{225 - 216,6}{15} = \frac{8,4}{15} = \mathbf{0,56}$
35.	$S_{35} = \frac{268 - (62)^2}{15} = \frac{268 - 3844}{15} = \frac{268 - 256,3}{15} = \frac{11,7}{15} = \mathbf{0,78}$

Reliability Test Step 2:

$$\Sigma S = S_1 + S_2 + S_3 \dots \dots \dots S_n$$

$$\begin{aligned}
 &= 0,25 + 0,73 + 0,51 + 1,26 + 1,04 + 0,73 + 0,73 + 1,18 + 1,04 + 0,78 + 1,29 + 0,8 + \\
 &\quad 0,78 + 0,89 + 0,25 + 0,73 + 0,51 + 1,26 + 1,04 + 0,73 + 0,73 + 1,18 + 1,04 + 0,78 \\
 &\quad + 1,29 + 0,8 + 0,78 + 0,89 \\
 &= \mathbf{41,05}
 \end{aligned}$$

Reliability Test Step 3:

$$S_1 = \frac{\Sigma X_1^2 - \frac{(\Sigma X_1)^2}{N}}{N}$$

$$\begin{aligned}
 S_I &= \frac{233498 - \frac{(1852)^2}{15}}{15} = \frac{233498 - \frac{3429904}{15}}{15} \\
 &= \frac{233498 - 228660,3}{15} \\
 &= \frac{4837,7}{15} \\
 &= \mathbf{322,5}
 \end{aligned}$$

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Reliability Test Step 4:

$$\begin{aligned}r_n &= \left(\frac{k}{k-1} \right) \cdot \left(1 - \frac{\sum S_1}{S_1} \right) \\&= \frac{35}{35-1} \times \left(1 - \frac{41,05}{322,5} \right) \\&= 1,03 (1 - 0,13) \\&= 1,03 (0,87) \\&= \mathbf{0,896 \text{ (reliable)}}$$

- the total of r_{hitung} has been compared with distribution of $\alpha = 0,05$ in which $r_{tabel} = 0,532$

Note: if $r_{hitung} > r_{tabel}$ it means the statement is reliable

if $r_{hitung} < r_{tabel}$ it means the statement is unreliable