

PERHITUNGAN VALIDITAS DAN RELIABILITAS BUTIR SOAL

A. Perhitungan Validitas Butir Soal

1. Diketahui : $N=31$; $\sum xy=1067$; $\sum x=27$; $\sum y=1154$; $\sum x^2=27$; $\sum y^2=45870$

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

$$r_{xy} = \frac{31(1067) - (27)(1154)}{\sqrt{\{31(27) - (27)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{33077 - 31158}{\sqrt{\{837 - 729\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1919}{\sqrt{9747432}}$$

$$r_{xy} = \frac{1919}{3122,08}$$

$$r_{xy} = 0,61$$

Kesimpulan :

Karena $r_{xy} = 0,61$ dan berada diantara $0,40 \leq r_{xy} < 0,700$ Maka, Validitas soal

No. 1 Berkorelasi sedang(soal dipakai).

2. Diketahui : $N=31$; $\sum xy=1064$; $\sum x=27$; $\sum y=1154$; $\sum x^2=27$; $\sum y^2=45870$

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

$$r_{xy} = \frac{31(1064) - (27)(1154)}{\sqrt{\{31(27) - (27)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{32984 - 31158}{\sqrt{\{837 - 729\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1826}{\sqrt{9747432}}$$

$$r_{xy} = \frac{1826}{3122,08}$$

$$r_{xy} = 0,58$$

Kesimpulan :

Karena $r_{xy} = 0,64$ dan berada diantara $0,40 \leq r_{xy} < 0,70$ Maka, Validitas soal

No. 2 Berkorelasi sedang (soal dipakai)

3. Diketahui : $N = 31$; $\sum xy = 1097$; $\sum x = 31$; $\sum y = 1154$; $\sum x^2 = 31$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1097) - (31)(1154)}{\sqrt{\{31(31) - (31)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{34007 - 32312}{\sqrt{\{868 - 784\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1695}{\sqrt{7581336}}$$

$$r_{xy} = \frac{1695}{2753,42}$$

$$r_{xy} = 0,62$$

Kesimpulan :

Karena $r_{xy} = 0,62$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas

soal No. 3 Berkorelasi sedang (soal dipakai).

4. Diketahui : $N = 31$; $\sum xy = 756$; $\sum x = 18$; $\sum y = 1154$; $\sum x^2 = 18$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(756) - (18)(1154)}{\sqrt{\{31(18) - (18)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{23436 - 20772}{\sqrt{\{558 - 324\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2664}{\sqrt{21119436}}$$

$$r_{xy} = \frac{2664}{4595,58}$$

$$r_{xy} = 0,58$$

Kesimpulan :

Karena $r_{xy} = 0,58$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 4 Berkorelasi sedang (soal dipakai)

5. Diketahui : $N = 31$; $\sum xy = 911$; $\sum x = 23$; $\sum y = 1154$; $\sum x^2 = 23$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(911) - (23)(1154)}{\sqrt{\{31(23) - (23)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{31241 - 26542}{\sqrt{\{713 - 529\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1699}{\sqrt{16606736}}$$

$$r_{xy} = \frac{1699}{4075,13}$$

$$r_{xy} = 0,42$$

Kesimpulan :

Karena $r_{xy} = 0,42$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 5 Berkorelasi sedang (soal dipakai).

6. Diketahui : $N=31$; $\sum xy=1062$; $\sum x=27$; $\sum y=1154$; $\sum x^2=27$; $\sum y^2=45870$

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

$$r_{xy} = \frac{31(1062) - (27)(1154)}{\sqrt{\{31(27) - (27)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{32922 - 31158}{\sqrt{\{837 - 729\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1764}{\sqrt{9747432}}$$

$$r_{xy} = \frac{1764}{3122,08}$$

$$r_{xy} = 0,57$$

Kesimpulan :

Karena $r_{xy} = 0,57$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No.6 Berkorelasi sedang (soal dipakai).

7. Diketahui : $N=31$; $\sum xy=1012$; $\sum x=25$; $\sum y=1154$; $\sum x^2=25$; $\sum y^2=45870$

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

$$r_{xy} = \frac{31(1012) - (25)(1154)}{\sqrt{\{31(25) - (25)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{31372 - 31850}{\sqrt{\{775 - 625\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2522}{\sqrt{13538100}}$$

$$r_{xy} = \frac{2522}{3679,41}$$

$$r_{xy} = 0,69$$

Kesimpulan :

Karena $r_{xy} = 0,69$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 7 Berkorelasi sedang (soal dipakai)

8. Diketahui : $N = 31$; $\sum xy = 1081$; $\sum x = 31$; $\sum y = 1154$; $\sum x^2 = 31$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1081) - (31)(1154)}{\sqrt{\{31(31) - (31)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{33511 - 32312}{\sqrt{\{868 - 784\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1199}{\sqrt{7581336}}$$

$$r_{xy} = \frac{1199}{2753,42}$$

$$r_{xy} = 0,44$$

Kesimpulan :

Karena $r_{xy} = 0,44$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 8 Berkorelasi sedang (soal dipakai).

9. Diketahui : $N = 31$; $\sum xy = 868$; $\sum x = 22$; $\sum y = 1154$; $\sum x^2 = 22$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(868) - (22)(1154)}{\sqrt{\{31(22) - (22)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{26908 - 25388}{\sqrt{\{682 - 484\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1520}{\sqrt{17870292}}$$

$$r_{xy} = \frac{1520}{4227,32}$$

$$r_{xy} = 0,36$$

Kesimpulan :

Karena $r_{xy} = 0,36$ dan berada diantara $0,20 \leq r_{xy} < 0,40$. Maka, Validitas soal No. 9 Berkorelasi rendah (soal dibuang).

10. Diketahui : $N = 31$; $\sum xy = 983$; $\sum x = 25$; $\sum y = 1154$; $\sum x^2 = 25$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(983) - (25)(1154)}{\sqrt{\{31(25) - (25)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{30473 - 31850}{\sqrt{\{775 - 625\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1623}{\sqrt{13538100}}$$

$$r_{xy} = \frac{1623}{3679,41}$$

$$r_{xy} = 0,44$$

Kesimpulan :

Karena $r_{xy} = 0,44$ dan berada diantara $0,44 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 10 Berkorelasi sedang (soal dipakai).

11. Diketahui : $N = 31$; $\sum xy = 1116$; $\sum x = 29$; $\sum y = 1154$; $\sum x^2 = 29$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1116) - (29)(1154)}{\sqrt{\{31(29) - (29)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{34596 - 33466}{\sqrt{\{899 - 841\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1130}{\sqrt{5234732}}$$

$$r_{xy} = \frac{1130}{2317,95}$$

$$r_{xy} = 0,49$$

Kesimpulan :

Karena $r_{xy} = 0,49$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 11 Berkorelasi sedang (soal dipakai).

12. Diketahui : $N=31$; $\sum xy=842$; $\sum x=21$; $\sum y=1154$; $\sum x^2=21$; $\sum y^2=45870$

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

$$r_{xy} = \frac{31(842) - (21)(1154)}{\sqrt{\{31(21) - (21)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{26102 - 24234}{\sqrt{\{651 - 441\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1868}{\sqrt{18953340}}$$

$$r_{xy} = \frac{1868}{4353,54}$$

$$r_{xy} = 0,43$$

Kesimpulan :

Karena $r_{xy} = 0.43$ dan berada diantara $0,40 \leq r_{xy} < 0,70$ Maka, Validitas soal No. 12 Berkorelasi sedang (soal dipakai).

13. Diketahui : $N = 31$; $\sum xy = 572$; $\sum x = 14$; $\sum y = 1154$; $\sum x^2 = 14$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(572) - (14)(1154)}{\sqrt{\{31(14) - (14)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{17732 - 16156}{\sqrt{\{434 - 196\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1576}{\sqrt{21480452}}$$

$$r_{xy} = \frac{1576}{4634,70}$$

$$r_{xy} = 0,34$$

Kesimpulan :

Karena $r_{xy} = 0,34$ dan berada diantara $0,20 \leq r_{xy} < 0,40$. Maka, Validitas soal No. 13 Berkorelasi rendah (soal dibuang).

14. Diketahui : $N = 31$; $\sum xy = 1086$; $\sum x = 31$; $\sum y = 1154$; $\sum x^2 = 31$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1086) - (31)(1154)}{\sqrt{\{31(31) - (31)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{33666 - 32312}{\sqrt{\{868 - 784\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1354}{\sqrt{7581336}}$$

$$r_{xy} = \frac{1354}{2753,42}$$

$$r_{xy} = 0,49$$

Kesimpulan :

Karena $r_{xy} = 0,49$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 14 Berkorelasi sedang (soal dipakai).

15. Diketahui : $N = 31$; $\sum xy = 998$; $\sum x = 25$; $\sum y = 1154$; $\sum x^2 = 25$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(998) - (25)(1154)}{\sqrt{\{31(25) - (25)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{30938 - 31850}{\sqrt{\{775 - 625\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2088}{\sqrt{13538100}}$$

$$r_{xy} = \frac{2088}{3679,41}$$

$$r_{xy} = 0,57$$

Kesimpulan :

Karena $r_{xy} = 0,57$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 15 Berkorelasi sedang (soal dipakai).

16. Diketahui : $N = 31$; $\sum xy = 921$; $\sum x = 23$; $\sum y = 1154$; $\sum x^2 = 23$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(921) - (23)(1154)}{\sqrt{\{31(23) - (23)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{31551 - 26542}{\sqrt{\{713 - 529\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2009}{\sqrt{16606736}}$$

$$r_{xy} = \frac{2009}{4075,13}$$

$$r_{xy} = 0,49$$

Kesimpulan :

Karena $r_{xy} = 0,49$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No.16 Berkorelasi sedang (soal dipakai).

17. Diketahui : $N = 31$; $\sum xy = 914$; $\sum x = 23$; $\sum y = 1154$; $\sum x^2 = 23$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(914) - (23)(1154)}{\sqrt{\{31(23) - (23)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{31334 - 26542}{\sqrt{\{713 - 529\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1792}{\sqrt{16606736}}$$

$$r_{xy} = \frac{1792}{4075,13}$$

$$r_{xy} = 0,44$$

Kesimpulan :

Karena $r_{xy} = 0,44$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 17 Berkorelasi sedang (soal dipakai).

18. Diketahui : $N = 31$; $\sum xy = 844$; $\sum x = 21$; $\sum y = 1154$; $\sum x^2 = 21$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(844) - (21)(1154)}{\sqrt{\{31(21) - (21)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{26164 - 24234}{\sqrt{\{651 - 441\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1930}{\sqrt{18953340}}$$

$$r_{xy} = \frac{1930}{4353,54}$$

$$r_{xy} = 0,44$$

Kesimpulan :

Karena $r_{xy} = 0,44$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 18 Berkorelasi sedang (soal dipakai).

19. Diketahui : $N = 31$; $\sum xy = 910$; $\sum x = 23$; $\sum y = 1154$; $\sum x^2 = 23$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(910) - (23)(1154)}{\sqrt{\{31(23) - (23)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{31210 - 26542}{\sqrt{\{713 - 529\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1668}{\sqrt{16606736}}$$

$$r_{xy} = \frac{1668}{4075,13}$$

$$r_{xy} = 0,41$$

Kesimpulan :

Karena $r_{xy} = 0,41$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 19 Berkorelasi sedang (soal dipakai).

20. Diketahui : $N = 31$; $\sum xy = 1082$; $\sum x = 31$; $\sum y = 1154$; $\sum x^2 = 31$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1082) - (31)(1154)}{\sqrt{\{31(31) - (31)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{33542 - 32312}{\sqrt{\{868 - 784\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1230}{\sqrt{7581336}}$$

$$r_{xy} = \frac{1230}{2753,42}$$

$$r_{xy} = 0,45$$

Kesimpulan :

Karena $r_{xy} = 0,45$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 20 Berkorelasi sedang (soal dipakai).

21. Diketahui : $N = 31$; $\sum xy = 1039$; $\sum x = 27$; $\sum y = 1154$; $\sum x^2 = 27$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1039) - (27)(1154)}{\sqrt{\{31(27) - (27)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{32209 - 31158}{\sqrt{\{837 - 729\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1051}{\sqrt{9747432}}$$

$$r_{xy} = \frac{1051}{3122,08}$$

$$r_{xy} = 0,34$$

Kesimpulan :

Karena $r_{xy} = 0,34$ dan berada diantara $0,20 \leq r_{xy} < 0,40$. Maka, Validitas soal No. 21 Berkorelasi rendah (soal dibuang)

22. Diketahui : $N = 31$; $\sum xy = 957$; $\sum x = 24$; $\sum y = 1154$; $\sum x^2 = 24$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(957) - (24)(1154)}{\sqrt{\{31(24) - (24)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{29667 - 27696}{\sqrt{\{744 - 576\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1971}{\sqrt{15162672}}$$

$$r_{xy} = \frac{1971}{3893,92}$$

$$r_{xy} = 0,51$$

Kesimpulan :

Karena $r_{xy} = 0,51$ dan berada diantara $0,40 \leq r_{xy} \leq 0,70$. Maka, Validitas soal No. 22 Berkorelasi sedang (soal dipakai).

23. Diketahui : $N = 31$; $\sum xy = 1006$; $\sum x = 26$; $\sum y = 1154$; $\sum x^2 = 26$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1006) - (26)(1154)}{\sqrt{\{31(26) - (26)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{31186 - 30004}{\sqrt{\{806 - 676\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1182}{\sqrt{11733020}}$$

$$r_{xy} = \frac{1182}{3425,34}$$

$$r_{xy} = 0,34$$

Kesimpulan :

Karena $r_{xy} = 0,34$ dan berada diantara $0,20 \leq r_{xy} < 0,40$. Maka, Validitas soal

No. 23 Berkorelasi rendah(soal dibuang).

24. Diketahui : $N = 31$; $\sum xy = 957$; $\sum x = 24$; $\sum y = 1154$; $\sum x^2 = 24$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(957) - (24)(1154)}{\sqrt{\{31(24) - (24)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{29667 - 27696}{\sqrt{\{744 - 576\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1971}{\sqrt{15162672}}$$

$$r_{xy} = \frac{1971}{3893,92}$$

$$r_{xy} = 0,50$$

Kesimpulan :

Karena $r_{xy} = 0,50$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas

soal No. 24 Berkorelasi sedang (soal dipakai).

25. Diketahui : $N = 31$; $\sum xy = 786$; $\sum x = 19$; $\sum y = 1154$; $\sum x^2 = 19$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(786) - (19)(1154)}{\sqrt{\{31(19) - (19)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{24366 - 21926}{\sqrt{\{589 - 361\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2440}{\sqrt{20577912}}$$

$$r_{xy} = \frac{2440}{4536,31}$$

$$r_{xy} = 0,54$$

Kesimpulan :

Karena $r_{xy} = 0,54$ dan berada diantara $0,40 \leq r_{xy} < 0,70$ Maka, Validitas soal

No. 25 Berkorelasi sedang (soal dipakai).

26. Diketahui : $N = 31$; $\sum xy = 917$; $\sum x = 23$; $\sum y = 1154$; $\sum x^2 = 23$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(917) - (23)(1154)}{\sqrt{\{31(23) - (23)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{31427 - 26542}{\sqrt{\{713 - 529\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1885}{\sqrt{16606736}}$$

$$r_{xy} = \frac{1885}{4075,13}$$

$$r_{xy} = 0,46$$

Kesimpulan :

Karena $r_{xy} = 0,46$ dan berada diantara $0,40 \leq r_{xy} \leq 0,70$. Maka, Validitas soal No. 26 Berkorelasi sedang (soal dipakai).

27. Diketahui : $N = 31$; $\sum xy = 765$; $\sum x = 19$; $\sum y = 1154$; $\sum x^2 = 19$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(765) - (19)(1154)}{\sqrt{\{31(19) - (19)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{23715 - 21926}{\sqrt{\{589 - 361\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1789}{\sqrt{20577912}}$$

$$r_{xy} = \frac{1789}{4536,31}$$

$$r_{xy} = 0,39$$

Kesimpulan :

Karena $r_{xy} = 0,39$ dan berada diantara $0,20 \leq r_{xy} \leq 0,40$. Maka, Validitas soal No. 27 Berkorelasi rendah (soal dibuang).

28. Diketahui : $N = 31$; $\sum xy = 950$; $\sum x = 24$; $\sum y = 1154$; $\sum x^2 = 24$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(950) - (24)(1154)}{\sqrt{\{31(24) - (24)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{29450 - 27696}{\sqrt{\{744 - 576\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1754}{\sqrt{15162672}}$$

$$r_{xy} = \frac{1754}{3893,92}$$

$$r_{xy} = 0,45$$

Kesimpulan :

Karena $r_{xy} = 0,45$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 31 Berkorelasi sedang (soal dipakai).

29. Diketahui : $N = 31$; $\sum xy = 985$; $\sum x = 25$; $\sum y = 1154$; $\sum x^2 = 25$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(985) - (25)(1154)}{\sqrt{\{31(25) - (25)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{30535 - 28850}{\sqrt{\{775 - 625\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1685}{\sqrt{13538100}}$$

$$r_{xy} = \frac{1685}{3679,41}$$

$$r_{xy} = 0,46$$

Kesimpulan :

Karena $r_{xy} = 0,46$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 29 Berkorelasi sedang (soal dipakai).

30. Diketahui : $N = 31$; $\sum xy = 809$; $\sum x = 20$; $\sum y = 1154$; $\sum x^2 = 20$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(809) - (20)(1154)}{\sqrt{\{31(20) - (20)^2\}\{31(45870) - (68)3^2\}}}$$

$$r_{xy} = \frac{25079 - 23080}{\sqrt{\{620 - 400\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1999}{\sqrt{19855880}}$$

$$r_{xy} = \frac{1999}{4455,99}$$

$$r_{xy} = 0,45$$

Kesimpulan :

Karena $r_{xy} = 0,45$ dan berada diantara $0,40 \leq r_{xy} \leq 0,70$ Maka, Validitas soal

No. 30 Berkorelasi sedang (soal dipakai).

31. Diketahui : $N=31$; $\sum xy=975$; $\sum x=25$; $\sum y=1154$; $\sum x^2=25$; $\sum y^2=45870$

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

$$r_{xy} = \frac{31(975) - (25)(1154)}{\sqrt{\{31(25) - (25)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{30225 - 28850}{\sqrt{\{775 - 625\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1375}{\sqrt{13538100}}$$

$$r_{xy} = \frac{1375}{3679,41}$$

$$r_{xy} = 0,37$$

Kesimpulan :

Karena $r_{xy} = 0,37$ dan berada diantara $0,20 \leq r_{xy} < 0,40$. Maka, Validitas soal No. 31 Berkorelasi rendah (soal dibuang).

32. Diketahui : $N = 31$; $\sum xy = 653$; $\sum x = 16$; $\sum y = 1154$; $\sum x^2 = 16$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(653) - (16)(1154)}{\sqrt{\{31(16) - (16)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{20243 - 18464}{\sqrt{\{496 - 256\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1779}{\sqrt{21660960}}$$

$$r_{xy} = 4654,13$$

$$r_{xy} = 0,38$$

Kesimpulan :

Karena $r_{xy} = 0,38$ dan berada diantara $0,20 \leq r_{xy} < 0,40$. Maka, Validitas soal No. 32 Berkorelasi rendah (soal dibuang).

33. Diketahui : $N = 31$; $\sum xy = 862$; $\sum x = 22$; $\sum y = 1154$; $\sum x^2 = 22$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(862) - (22)(1154)}{\sqrt{\{31(22) - (22)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{26722 - 25388}{\sqrt{\{682 - 484\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1334}{17870292}$$

$$r_{xy} = \frac{1334}{4227,32}$$

$$r_{xy} = 0,32$$

Kesimpulan :

Karena $r_{xy} = 0,32$ dan berada diantara $0,20 \leq r_{xy} < 0,40$. Maka, Validitas soal No. 33 Berkorelasi rendah (soal dibuang).

34. Diketahui : $N = 31$; $\sum xy = 1094$; $\sum x = 28$; $\sum y = 1154$; $\sum x^2 = 28$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1094) - (28)(1154)}{\sqrt{\{31(28) - (28)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{33914 - 32312}{\sqrt{\{868 - 784\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1602}{7581336}$$

$$r_{xy} = \frac{1602}{2753,42}$$

$$r_{xy} = 0,58$$

Kesimpulan :

Karena $r_{xy} = 0,58$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 34 Berkorelasi sedang (soal dipakai).

35. Diketahui : $N = 31$; $\sum xy = 978$; $\sum x = 25$; $\sum y = 1154$; $\sum x^2 = 25$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(978) - (25)(1154)}{\sqrt{\{31(25) - (25)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{30318 - 28850}{\sqrt{\{775 - 625\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1468}{\sqrt{13538100}}$$

$$r_{xy} = \frac{1468}{3679,41}$$

$$r_{xy} = 0,40$$

Kesimpulan :

Karena $r_{xy} = 0,40$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 35 Berkorelasi sedang (soal dipakai).

36. Diketahui : $N = 31$; $\sum xy = 846$; $\sum x = 21$; $\sum y = 1154$; $\sum x^2 = 21$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(846) - (21)(1154)}{\sqrt{\{31(21) - (21)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{26226 - 24234}{\sqrt{\{651 - 441\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1992}{\sqrt{18953340}}$$

$$r_{xy} = \frac{1992}{4353,54}$$

$$r_{xy} = 0,46$$

Kesimpulan :

Karena $r_{xy} = 0,46$ dan berada diantara $0,40 \leq r_{xy} \leq 0,70$. Maka, Validitas soal No. 38 Berkorelasi sedang (soal dipakai).

37. Diketahui : $N = 31$; $\sum xy = 724$; $\sum x = 17$; $\sum y = 1154$; $\sum x^2 = 17$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(724) - (17)(1154)}{\sqrt{\{31(17) - (17)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{22444 - 19618}{\sqrt{\{527 - 289\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2826}{\sqrt{21480452}}$$

$$r_{xy} = \frac{2826}{4634,70}$$

$$r_{xy} = 0,61$$

Kesimpulan :

Karena $r_{xy} = 0,61$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 37 Berkorelasi sedang (soal dipakai).

38. Diketahui : $N = 31$; $\sum xy = 1014$; $\sum x = 26$; $\sum y = 1154$; $\sum x^2 = 26$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1014) - (26)(1154)}{\sqrt{\{31(26) - (26)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{31434 - 30004}{\sqrt{\{806 - 676\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1430}{\sqrt{11733020}}$$

$$r_{xy} = \frac{1430}{3425,34}$$

$$r_{xy} = 0,41$$

Kesimpulan :

Karena $r_{xy} = 0,41$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 38 Berkorelasi sedang (soal dipakai).

39. Diketahui : $N = 31$; $\sum xy = 767$; $\sum x = 19$; $\sum y = 1154$; $\sum x^2 = 19$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(767) - (19)(1154)}{\sqrt{\{31(19) - (19)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{23777 - 21926}{\sqrt{\{589 - 361\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1851}{\sqrt{20577912}}$$

$$r_{xy} = \frac{1851}{4536,28}$$

$$r_{xy} = 0,41$$

Kesimpulan :

Karena $r_{xy} = 0,41$ dan berada diantara $0,40 \leq r_{xy} < 0,70$ Maka, Validitas soal No. 39 Berkorelasi sedang (soal dipakai).

40. Diketahui : $N = 31$; $\sum xy = 964$; $\sum x = 24$; $\sum y = 1154$; $\sum x^2 = 24$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(964) - (24)(1154)}{\sqrt{\{31(24) - (24)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{29884 - 27696}{\sqrt{\{744 - 576\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2188}{\sqrt{15162672}}$$

$$r_{xy} = \frac{2188}{3893,92}$$

$$r_{xy} = 0,56$$

Kesimpulan :

Karena $r_{xy} = 0,56$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 40 Berkorelasi sedang (soal dipakai).

41. Diketahui : $N = 31$; $\sum xy = 794$; $\sum x = 20$; $\sum y = 1154$; $\sum x^2 = 20$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(794) - (20)(1154)}{\sqrt{\{31(20) - (20)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{24614 - 23080}{\sqrt{\{620 - 400\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1534}{\sqrt{19855880}}$$

$$r_{xy} = \frac{1534}{4455,99}$$

$$r_{xy} = 0,34$$

Kesimpulan :

Karena $r_{xy} = 0,34$ dan berada diantara $0,20 \leq r_{xy} < 0,40$. Maka, Validitas soal No. 41 Berkorelasi rendah (soal dibuang).

42. Diketahui : $N = 31$; $\sum xy = 1065$; $\sum x = 27$; $\sum y = 1154$; $\sum x^2 = 27$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1065) - (27)(1154)}{\sqrt{\{31(27) - (27)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{33015 - 31158}{\sqrt{\{837 - 729\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1857}{\sqrt{9747432}}$$

$$r_{xy} = \frac{1857}{3122,08}$$

$$r_{xy} = 0,59$$

Kesimpulan :

Karena $r_{xy} = 0,59$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 42 Berkorelasi sedang (soal dipakai).

43. Diketahui : $N=31$; $\sum xy=953$; $\sum x=24$; $\sum y=1154$; $\sum x^2=24$; $\sum y^2=45870$

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

$$r_{xy} = \frac{31(953) - (24)(1154)}{\sqrt{\{31(24) - (24)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{29543 - 27696}{\sqrt{\{744 - 576\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1847}{\sqrt{15162672}}$$

$$r_{xy} = \frac{1847}{3893,92}$$

$$r_{xy} = 0,47$$

Kesimpulan :

Karena $r_{xy} = 0,47$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 43 Berkorelasi sedang (soal dipakai).

44. Diketahui : $N = 31$; $\sum xy = 774$; $\sum x = 18$; $\sum y = 1154$; $\sum x^2 = 18$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(774) - (18)(1154)}{\sqrt{\{31(18) - (18)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{23994 - 20772}{\sqrt{\{558 - 324\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{3222}{\sqrt{21119436}}$$

$$r_{xy} = \frac{3222}{4595,58}$$

$$r_{xy} = 0,70$$

Kesimpulan :

Karena $r_{xy} = 0,70$ dan berada diantara $0,70 \leq r_{xy} < 0,90$. Maka, Validitas soal No. 44 Berkorelasi tinggi (soal dipakai).

45. Diketahui : $N = 31$; $\sum xy = 953$; $\sum x = 24$; $\sum y = 1154$; $\sum x^2 = 24$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(953) - (24)(1154)}{\sqrt{\{31(24) - (24)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{29543 - 27696}{\sqrt{\{744 - 576\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1847}{\sqrt{15162672}}$$

$$r_{xy} = \frac{1847}{3893,92}$$

$$r_{xy} = 0,47$$

Kesimpulan :

Karena $r_{xy} = 0,47$ dan berada diantara $0,40 \leq r_{xy} \leq 0,70$. Maka, Validitas soal No. 45 Berkorelasi sedang (soal dipakai)

46. Diketahui : $N = 31$; $\sum xy = 1047$; $\sum x = 27$; $\sum y = 1154$; $\sum x^2 = 27$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(1047) - (27)(1154)}{\sqrt{\{31(27) - (27)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{32457 - 31158}{\sqrt{\{837 - 729\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1299}{\sqrt{9747432}}$$

$$r_{xy} = \frac{1299}{3122,08}$$

$$r_{xy} = 0,42$$

Kesimpulan :

Karena $r_{xy} = 0,42$ dan berada diantara $0,40 \leq r_{xy} < 0,70$. Maka, Validitas soal No. 46 Berkorelasi sedang (soal dipakai).

47. Diketahui : $N = 31$; $\sum xy = 659$; $\sum x = 16$; $\sum y = 1154$; $\sum x^2 = 16$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(659) - (16)(1154)}{\sqrt{\{31(16) - (16)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{20429 - 18464}{\sqrt{\{496 - 256\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1965}{\sqrt{21660960}}$$

$$r_{xy} = \frac{1965}{4654,13}$$

$$r_{xy} = 0,42$$

Kesimpulan :

Karena $r_{xy} = 0,42$ dan berada diantara ≤ 0.40 sampai < 0.70 . Maka, Validitas soal No. 47 Berkorelasi sedang (soal dipakai).

48. Diketahui : $N = 31$; $\sum xy = 922$; $\sum x = 23$; $\sum y = 1154$; $\sum x^2 = 23$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(922) - (23)(1154)}{\sqrt{\{31(23) - (23)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{28582 - 26542}{\sqrt{\{713 - 529\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2040}{\sqrt{16606736}}$$

$$r_{xy} = \frac{2040}{4075,13}$$

$$r_{xy} = 0,50$$

Kesimpulan :

Karena $r_{xy} = 0,50$ dan berada diantara $0,40 \leq r_{xy} \leq 0,70$.. Maka, Validitas soal No. 48 Berkorelasi sedang (soal dipakai).

49. Diketahui : $N = 31$; $\sum xy = 794$; $\sum x = 20$; $\sum y = 1154$; $\sum x^2 = 20$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(794) - (20)(1154)}{\sqrt{\{31(20) - (20)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{24614 - 23080}{\sqrt{\{620 - 400\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{1534}{\sqrt{19855880}}$$

$$r_{xy} = \frac{1534}{4455,99}$$

$$r_{xy} = 0,34$$

Kesimpulan :

Karena $r_{xy} = 0,34$ dan berada diantara $0,20 \leq r_{xy} \leq 0,40$ Maka, Validitas soal

No. 49 Berkorelasi rendah(soal dipakai).

50. Diketahui : $N = 31$; $\sum xy = 676$ $\sum x = 16$; $\sum y = 1154$; $\sum x^2 = 16$; $\sum y^2 = 45870$

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

$$r_{xy} = \frac{31(676) - (16)(1154)}{\sqrt{\{31(16) - (16)^2\}\{31(45870) - (1154)^2\}}}$$

$$r_{xy} = \frac{20956 - 18464}{\sqrt{\{496 - 256\}\{1421970 - 1331716\}}}$$

$$r_{xy} = \frac{2492}{\sqrt{21660960}}$$

$$r_{xy} = \frac{2492}{4654,13}$$

$$r_{xy} = 0,54$$

Kesimpulan :

Karena $r_{xy} = 0,54$ dan berada diantara $0,40 \leq r_{xy} \leq 0,70$. Maka, Validitas soal No. 50 Berkorelasi sedang (soal dipakai).

B. Reliabilitas Butir Soal

1. Jumlah data (N) = 31

2. Data terkecil = 18

Data terbesar = 46

3. Menentukan rentang (r)

$r = \text{data terbesar} - \text{data terkecil}$

$$= 46 - 18$$

$$= 28$$

4. Menentukan banyak kelas interval (k)

$$k = 1 + 3,3 \log N$$

$$= 1 + 3,3 \log 31$$

$$= 1 + 3,3 (1,49)$$

$$= 1 + 4,917$$

$$= 5,917 \text{ dijadikan } 6$$

5. Menentukan panjang kelas interval (p)

$$p = \frac{r}{k} \longrightarrow \frac{28}{6} = p = 4,67 \text{ maka diambil } 5$$

6. Membuat daftar distribusi frekuensi

Kelas Interval	Fi	Xi	fiXi	(Xi- $\bar{X}$)	(Xi- $\bar{X}$) ²	Fi(Xi- $\bar{X}$) ²
18 - 22	6	20	120	-16,9	285,61	1713,66
23 - 27	0	25	0	-11,9	141,61	0
28 - 32	4	30	120	-6,9	47,61	190,44
33 - 37	1	35	35	-1,9	3,61	3,61
38 - 42	6	40	240	4,1	16,81	100,86
43 - 47	14	45	630	8,1	65,61	918,54
Jumlah	31	195	1145		704,86	2927,11

7. Menentukan rata-rata($\bar{x}$)

$$\begin{aligned}\bar{x} &= \frac{\sum fiXi}{\sum fi} \\ &= \frac{1145}{31} \\ &= 36,9\end{aligned}$$

8. Menentukan varians (S^2 atau V_t)

$$\begin{aligned}S^2 \text{ atau } V_t &= \frac{\sum fi(Xi - \bar{X})^2}{(n-1)} \\ &= \frac{2927,11}{(31-1)}\end{aligned}$$

$$S^2 \text{ atau } V_t = 97,57$$

9. Menentukan r_{11}

$$\text{Diketahui : } k = 40$$

$$V_t = 97,57$$

$$\sum pq = 8,77$$

$$r_{11} = \left(\frac{k}{k-1} \right) \left(\frac{V_t - \sum pq}{V_t} \right)$$

$$= \left(\frac{40}{40-1} \right) \left(\frac{97,57-8,77}{97,57} \right)$$

$$= \frac{40}{39} \times 0,91$$

$$= 0,93$$

Reliabilitas = 0,93 (Reliabilitas Sangat Tinggi)