

## Lampiran 5

### Hitungan Uji Coba Validitas $X_1$

Butir soal 1

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$
$$r_{xy} = \frac{12.1652 - 26.707}{\sqrt{\{12.66 - (26)^2\} \cdot \{12.43881 - (707)^2\}}}$$
$$r_{xy} = \frac{19824 - 18382}{\sqrt{\{792 - 676\} \cdot \{526572 - 499849\}}}$$
$$r_{xy} = \frac{1442}{\sqrt{116.26723}}$$
$$r_{xy} = \frac{1442}{\sqrt{3099868}} = \frac{1442}{1760,644} = 0,819$$

Butir soal 2

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$
$$r_{xy} = \frac{12.1625 - 26.707}{\sqrt{\{12.62 - (26)^2\} \cdot \{12.43881 - (707)^2\}}}$$
$$r_{xy} = \frac{19500 - 18382}{\sqrt{\{744 - 676\} \cdot \{526572 - 499849\}}}$$
$$r_{xy} = \frac{1118}{\sqrt{68.26723}}$$
$$r_{xy} = \frac{1118}{\sqrt{1817164}} = \frac{1118}{1348,022} = 0,829$$

Butir soal 3

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$
$$r_{xy} = \frac{12.1560 - 25.707}{\sqrt{\{12.59 - (25)^2\} \cdot \{12.43881 - (707)^2\}}}$$
$$r_{xy} = \frac{18720 - 17675}{\sqrt{\{708 - 625\} \cdot \{526572 - 499849\}}}$$
$$r_{xy} = \frac{1045}{\sqrt{83.26723}}$$
$$r_{xy} = \frac{1045}{\sqrt{2218009}} = \frac{1045}{1489,298} = 0,701$$

Butir soal 4

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$
$$r_{xy} = \frac{12.1713 - 28.707}{\sqrt{\{12.70 - (28)^2\} \cdot \{12.43881 - (707)^2\}}}$$
$$r_{xy} = \frac{20556 - 19796}{\sqrt{\{840 - 784\} \cdot \{526572 - 499849\}}}$$
$$r_{xy} = \frac{760}{\sqrt{56.26723}}$$
$$r_{xy} = \frac{760}{\sqrt{1496488}} = \frac{760}{1223,310} = 0,621$$

Butir soal 5

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$
$$r_{xy} = \frac{12.1828 - 30.707}{\sqrt{\{12.78 - (30)^2\} \cdot \{12.43881 - (707)^2\}}}$$
$$r_{xy} = \frac{21936 - 21210}{\sqrt{\{936 - 900\} \cdot \{526572 - 499849\}}}$$
$$r_{xy} = \frac{726}{\sqrt{36.26723}}$$
$$r_{xy} = \frac{726}{\sqrt{962028}} = \frac{726}{980,830} = 0,74$$

Butir soal 6

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$
$$r_{xy} = \frac{12.1555 - 25.707}{\sqrt{\{12.57 - (25)^2\} \cdot \{12.43881 - (707)^2\}}}$$
$$r_{xy} = \frac{18660 - 17675}{\sqrt{\{684 - 625\} \cdot \{526572 - 499849\}}}$$
$$r_{xy} = \frac{985}{\sqrt{59.26723}}$$
$$r_{xy} = \frac{985}{\sqrt{1576657}} = \frac{985}{1255,65} = 0,784$$

Butir soal 7

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

$$r_{xy} = \frac{12 \cdot 1588 - 25 \cdot 707}{\sqrt{\{12 \cdot 61 - (25)^2\} \cdot \{12 \cdot 43881 - (707)^2\}}}$$

$$r_{xy} = \frac{19056 - 17675}{\sqrt{\{732 - 625\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{1381}{\sqrt{107 \cdot 26723}}$$

$$r_{xy} = \frac{1381}{\sqrt{2859361}} = \frac{1381}{1690,964} = 0,816$$

Butir soal 8

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

$$r_{xy} = \frac{12 \cdot 1553 - 26 \cdot 707}{\sqrt{\{12 \cdot 62 - (26)^2\} \cdot \{12 \cdot 43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18636 - 18382}{\sqrt{\{744 - 676\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{254}{\sqrt{68 \cdot 26723}}$$

$$r_{xy} = \frac{254}{\sqrt{1817164}} = \frac{254}{1348,022} = 0,188$$

Butir soal 9

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

$$r_{xy} = \frac{12 \cdot 1523 - 25 \cdot 707}{\sqrt{\{12 \cdot 55 - (25)^2\} \cdot \{12 \cdot 43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18276 - 17675}{\sqrt{\{660 - 625\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{601}{\sqrt{35 \cdot 26723}}$$

$$r_{xy} = \frac{601}{\sqrt{935305}} = \frac{601}{967,111} = 0,621$$

Butir soal 10

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

$$r_{xy} = \frac{12 \cdot 1605 - 26 \cdot 707}{\sqrt{\{12 \cdot 63 - (26)^2\} \cdot \{12 \cdot 43881 - (707)^2\}}}$$

$$r_{xy} = \frac{19260 - 18382}{\sqrt{\{756 - 676\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{878}{\sqrt{80 \cdot 26723}}$$

$$r_{xy} = \frac{878}{\sqrt{2137840}} = \frac{878}{1462,213} = 0,60$$

Butir soal 11

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

$$r_{xy} = \frac{12 \cdot 1729 - 28 \cdot 707}{\sqrt{\{12 \cdot 72 - (28)^2\} \cdot \{12 \cdot 43881 - (707)^2\}}}$$

$$r_{xy} = \frac{20748 - 19796}{\sqrt{\{864 - 784\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{952}{\sqrt{80 \cdot 26723}}$$

$$r_{xy} = \frac{952}{\sqrt{2137840}} = \frac{952}{1462,135} = 0,651$$

Butir soal 12

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

$$r_{xy} = \frac{12 \cdot 1464 - 23 \cdot 707}{\sqrt{\{12 \cdot 51 - (23)^2\} \cdot \{12 \cdot 43881 - (707)^2\}}}$$

$$r_{xy} = \frac{17568 - 16261}{\sqrt{\{612 - 529\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{1307}{\sqrt{83 \cdot 26723}}$$

$$r_{xy} = \frac{1307}{\sqrt{2218009}} = \frac{1307}{1489,298} = 0,877$$

Butir soal 13

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

$$r_{xy} = \frac{12.1517 - 25.707}{\sqrt{\{12.59 - (25)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18204 - 17675}{\sqrt{\{708 - 625\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{529}{\sqrt{83.26723}}$$

$$r_{xy} = \frac{529}{\sqrt{2218009}} = \frac{529}{1489,298} = 0,355$$

Butir soal 14

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

$$r_{xy} = \frac{12.1729 - 28.707}{\sqrt{\{12.72 - (28)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{20748 - 19796}{\sqrt{\{864 - 784\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{952}{\sqrt{80.26723}}$$

$$r_{xy} = \frac{952}{\sqrt{2137840}} = \frac{952}{1462,135} = 0,651$$

Butir soal 15

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

$$r_{xy} = \frac{12.1481 - 24.707}{\sqrt{\{12.54 - (24)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{17772 - 16968}{\sqrt{\{648 - 576\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{804}{\sqrt{72.26723}}$$

$$r_{xy} = \frac{804}{\sqrt{1924056}} = \frac{804}{1387,103} = 0,579$$

Butir soal 16

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

$$r_{xy} = \frac{12.1540 - 24.707}{\sqrt{\{12.58 - (24)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18480 - 16968}{\sqrt{\{696 - 576\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{1512}{\sqrt{120.26723}}$$

$$r_{xy} = \frac{1512}{\sqrt{3206760}} = \frac{1512}{1790,742} = 0,844$$

Butir soal 17

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

$$r_{xy} = \frac{12.1523 - 25.707}{\sqrt{\{12.55 - (25)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18276 - 17675}{\sqrt{\{660 - 625\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{601}{\sqrt{35.26723}}$$

$$r_{xy} = \frac{601}{\sqrt{935305}} = \frac{601}{967,111} = 0,621$$

Butir soal 18

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

$$r_{xy} = \frac{12.1512 - 25.707}{\sqrt{\{12.57 - (25)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18144 - 1675}{\sqrt{\{684 - 625\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{469}{\sqrt{59.26723}}$$

$$r_{xy} = \frac{469}{\sqrt{1576657}} = \frac{469}{1255,65} = 0,373$$

Butir soal 19

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

$$r_{xy} = \frac{12.1204 - 20.707}{\sqrt{\{12.40 - (20)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{14448 - 14140}{\sqrt{\{480 - 400\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{308}{\sqrt{80.26723}}$$

$$r_{xy} = \frac{308}{\sqrt{2137840}} = \frac{308}{1462,135} = 0,21$$

Butir soal 20

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

$$r_{xy} = \frac{12.1652 - 26.707}{\sqrt{\{12.66 - (26)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{19824 - 18382}{\sqrt{\{792 - 676\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{1442}{\sqrt{116.26723}}$$

$$r_{xy} = \frac{1442}{\sqrt{3099868}} = \frac{1442}{1760,644} = 0,819$$

Butir soal 21

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

$$r_{xy} = \frac{12.1828 - 30.707}{\sqrt{\{12.78 - (30)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{21936 - 21210}{\sqrt{\{936 - 900\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{726}{\sqrt{36.26723}}$$

$$r_{xy} = \frac{726}{\sqrt{962028}} = \frac{726}{980,83} = 0,74$$

Butir soal 22

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

$$r_{xy} = \frac{12.1456 - 23.707}{\sqrt{\{12.51 - (23)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{17472 - 16261}{\sqrt{\{612 - 529\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{1211}{\sqrt{83.26723}}$$

$$r_{xy} = \frac{1211}{\sqrt{2218009}} = \frac{1211}{1489,298} = 0,813$$

Butir soal 23

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

$$r_{xy} = \frac{12.1627 - 27.707}{\sqrt{\{12.67 - (27)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{19524 - 19089}{\sqrt{\{804 - 729\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{435}{\sqrt{75.26723}}$$

$$r_{xy} = \frac{435}{\sqrt{2004225}} = \frac{435}{1415,706} = 0,307$$

Butir soal 24

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

$$r_{xy} = \frac{12.1537 - 24.707}{\sqrt{\{12.56 - (24)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18444 - 16968}{\sqrt{\{672 - 576\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{1476}{\sqrt{96.26723}}$$

$$r_{xy} = \frac{1476}{\sqrt{2565408}} = \frac{1476}{1601,689} = 0,921$$

Butir soal 25

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

$$r_{xy} = \frac{12.1456 - 23.707}{\sqrt{\{12.53 - (23)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{17472 - 16261}{\sqrt{\{636 - 529\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{1211}{\sqrt{107.26723}}$$

$$r_{xy} = \frac{1211}{\sqrt{2859361}} = \frac{1211}{1690,964} = 0,716$$

Butir soal 26

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

$$r_{xy} = \frac{12.1540 - 24.707}{\sqrt{\{12.58 - (24)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18480 - 16968}{\sqrt{\{696 - 576\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{1512}{\sqrt{120.26723}}$$

$$r_{xy} = \frac{1512}{\sqrt{3206760}} = \frac{1512}{1790,742} = 0,844$$

Butir soal 27

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

$$r_{xy} = \frac{12.1559 - 26.707}{\sqrt{\{12.60 - (26)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{18708 - 18382}{\sqrt{\{720 - 676\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{326}{\sqrt{44.26723}}$$

$$r_{xy} = \frac{326}{\sqrt{1175812}} = \frac{326}{1084,348} = 0,301$$

Butir soal 28

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

$$r_{xy} = \frac{12.1729 - 28.707}{\sqrt{\{12.72 - (28)^2\} \cdot \{12.43881 - (707)^2\}}}$$

$$r_{xy} = \frac{20748 - 19796}{\sqrt{\{864 - 784\} \cdot \{526572 - 499849\}}}$$

$$r_{xy} = \frac{952}{\sqrt{80.26723}}$$

$$r_{xy} = \frac{952}{\sqrt{2137840}} = \frac{952}{1462,135} = 0,651$$