**ANALISIS DATA STATISTIK**

Lampiran 10

**Nilai Hasil *Pretest* dan *Posttest* kelas VIII SMP Negeri 6 Tinambung Kabupaten Polewali Mandar**

|  |  |  |
| --- | --- | --- |
| **No** | ***Pretest* (X)** | ***Posttest* (Y)** |
| **X** | **F** | **fX** | **fX2** | **Y** | **F** | **fY** | **fY2** |
| 1 | 70 | 4 | 280 | 19600 | 90 | 1 | 90 | 8100 |
| 2 | 60 | 2 | 120 | 7200 | 85 | 7 | 595 | 50575 |
| 3 | 55 | 3 | 165 | 9075 | 80 | 5 | 400 | 32000 |
| 4 | 50 | 4 | 200 | 10000 | 75 | 5 | 375 | 28125 |
| 5 | 45 | 6 | 270 | 12150 | 70 | 1 | 70 | 4900 |
| 6 | 40 | 3 | 120 | 4800 | 60 | 4 | 240 | 14400 |
| 7 | 35 | 1 | 35 | 1225 | 50 | 5 | 250 | 12500 |
| 8 | 30 | 1 | 30 | 900 | 30 | 1 | 30 | 900 |
| 9 | 25 | 2 | 50 | 1250 | 25 | 0 | 0 | 0 |
| 10 | 20 | 3 | 60 | 1200 | 20 | 0 | 0 | 0 |
|  | - | 29 | 1330 | 67400 | - | 29 | 2050 | 151500 |

1. Mencari Nilai Mean *Pretest* X

$$M\_{x}=\frac{∑fX}{N}$$

$$ =\frac{1330}{29}$$

 $=45,86206$

1. Mencari Nilai Mean *Posttest* Y

$$M\_{y}=\frac{∑fY}{N}$$

$$=\frac{2050}{29}$$

$$=70,68965$$

1. Mencari Standar Deviasi Kuadrat X

$$SDx^{2}=\frac{\sum\_{}^{}fX^{2}}{N}-Mx^{2}$$

$$=\frac{67400}{29}-(45,86206)^{2}$$

$$ =2324,137-2103,328$$

$$ =220,809$$

1. Mencari Standar Deviasi Kuadrat Y

$$SDy^{2}=\frac{\sum\_{}^{}fY^{2}}{N}-My^{2}$$

$$ =\frac{151500}{29}-(70,68965)^{2}$$

$$ =5224.137-4997,026$$

$$ =227.111$$

1. Standar Deviasi Rata-Rata Kuadrat X

$$SD^{2}M\_{x}=\frac{SD\_{x^{2}}}{N -1}$$

$$ =\frac{220,809}{29 -1}$$

$$ =\frac{220,809}{28}$$

$$ =7,88603$$

1. Standar Deviasi Rata-Rata Kuadrat Y

$$ SD^{2}M\_{y}=\frac{SD\_{y^{2}}}{N -1}$$

$$ =\frac{227,111}{29 -1}$$

$$ =\frac{227,111}{28}$$

$$ =8,11110$$

1. Mencari SDbm menggunakan rumus

SDbm= $\sqrt{SD^{2}M\_{x}+ SD^{2}M\_{y}}$

$$ =\sqrt{7,88603+8,11110 }$$

$$ =\sqrt{15,99713 }$$

$$ =3,99964$$

Selanjutnya sudah dapat digunakan rumus t-test

$$a. t-test= \frac{M\_{y}-M\_{x}}{SD\_{bm}}$$

$$ = \frac{70,68965-45,86206}{3,99964}$$

$$ =\frac{24.82759}{3.99964}$$

$$ =6.20745$$

$$b. d.b=\left(Nx+Ny\right)-2$$

$$ =\left(29+29\right)-2$$

$$ =58-2$$

$$ =56$$