

Lampiran 4

A. Menghitung rata-rata dan simpangan baku

1. Variabel Kekuatan Otot Lengan (X_1)

$$\text{Diketahui : } \sum X_1 = 372,80$$

$$\sum X_1^2 = 7178,84$$

$$n = 20$$

$$\begin{aligned} \text{a. Rata-rata } X_1 &= \frac{\sum X_1}{n} \\ &= \frac{372,80}{20} \\ &= 18,64 \end{aligned}$$

$$\begin{aligned}
 \text{b. Simpangan Baku} &= \sqrt{\frac{n \sum X_1^2 - (\sum X_1)^2}{n(n-1)}} \\
 &= \sqrt{\frac{(20 \cdot 7178,84) - (372,80)^2}{20(20-1)}} \\
 &= \sqrt{\frac{143576,8 - 138979,84}{380}} \\
 &= \sqrt{\frac{4596,96}{380}} \\
 &= \sqrt{12,09} \\
 &= 3,47
 \end{aligned}$$

$$\text{c. Varian} = 12,09$$

2. Variabel Daya Ledak Otot Tungkai (X_2)

Diketahui : $\sum X_2 = 821,00$

$$\sum X_2^2 = 34381,00$$

$$n = 20$$

a. Rata-rata $X_1 = \frac{\sum X_2}{n}$

$$= \frac{821,00}{20}$$

$$= 41,05$$

b. Simpangan Baku $= \sqrt{\frac{n \sum X_2^2 - (\sum X_2)^2}{n(n-1)}}$

$$= \sqrt{\frac{(20 \cdot 34381) - (821,00)^2}{20(20-1)}}$$

$$= \sqrt{\frac{687620 - 674041}{380}}$$

$$= \sqrt{\frac{13579}{380}}$$

$$= \sqrt{35,73}$$

$$= 5,97$$

c. Varian $= 35,73$

3. Variabel Kemampuan Renang Gaya Dada (Y)

Diketahui : $\sum Y = 337,00$

$$\sum Y^2 = 5757,00$$

$$n = 30$$

a. Rata-rata $X_1 = \frac{\sum Y}{n}$

$$= \frac{337,00}{20}$$

$$= 16,85$$

b. Simpangan Baku $= \sqrt{\frac{n \sum Y^2 - (\sum Y)^2}{n(n-1)}}$

$$= \sqrt{\frac{(20 \cdot 5757,00) - (337,00)^2}{20(20-1)}}$$

$$= \sqrt{\frac{115140 - 113569}{380}}$$

$$= \sqrt{\frac{1571}{380}}$$

$$= \sqrt{4,13}$$

$$= 2,03$$

c. Varian $= 4,13$

B. Menentukan T Skor

Perhitungan T Skor Variabel Kekuatan Otot Lengan, Daya Ledak Otot Tungkai, Renang Gaya Dada menggunakan rumus:

$$T \text{ Skor} = 50 \pm 10 \left[\frac{X - \bar{X}}{SD} \right]$$

Langkah-langkah perhitungan

Contoh : n ke-1 Dari X_1

$$T \text{ Skor} = 50 + 10 \left[\frac{16,0 - 18,64}{3,47} \right]$$

$$= 50 + 10 [-0,76]$$

$$= 50 + [-7,60]$$

$$= 42,39$$

Contoh : n ke-1 Dari X_2

$$\begin{aligned}T \text{ Skor} &= 50 + 10 \left[\frac{28-41,05}{5,97} \right] \\&= 50 + 10 [-2,18] \\&= 50 + [-21,86] \\&= 28,14\end{aligned}$$

Contoh : n ke-1 Dari Y

$$\begin{aligned}T \text{ Skor} &= 50 + 10 \left[\frac{12-16,85}{2,03} \right] \\&= 50 + 10 [-2,38] \\&= 50 + [-23,89] \\&= 26,11\end{aligned}$$