

Lampiran 6.

Langkah – langkah penghitungan Distribusi Frekuensi

A. Variabel Frekuensi Tes Awal *Compass Drill*

$$1) \text{ Rentang (R) = Data Terbesar – Data Terkecil}$$

$$= 13,32 – 18,08$$

$$= -4,76$$

$$2) \text{ Kelas Interval (KI) = } 1 + (3,3 \log 20)$$

$$= 1 + (3,3 \times 1,301)$$

$$= 1 + 4,293$$

$$= 5,293 (5)$$

$$3) \text{ Panjang Kelas (I) = } \frac{R}{KI}$$

$$= \frac{-4,76}{5}$$

$$= -0,95$$

B. Variabel Frekuensi Tes Akhir *Compass Drill*

1) Rentang (R) = Data Terbesar – Data Terkecil

$$= 11,62 - 16,09$$

$$= -4,47$$

2) Kelas Interval (KI) = $1 + (3,3 \log 20)$

$$= 1 + (3,3 \times 1,301)$$

$$= 1 + 4,293$$

$$= 5,293 (5)$$

3) Panjang Kelas (I) = $\frac{R}{KI}$

$$KI$$

$$= \frac{-4,47}{5}$$

$$5$$

$$= -0,89$$

Lampiran 7.

Perhitungan Data Awal dan Akhir

1. Mencari Mean Data Awal dan Akhir

$$\begin{aligned}
 M_x &= \frac{\sum x}{n} & M_y &= \frac{\sum y}{n} \\
 &= \frac{309,71}{20} & &= \frac{274,18}{20} \\
 &= 15,49 & &= 13,71
 \end{aligned}$$

2. Mencari Standar Deviasi Tes Awal dan Akhir

$$\begin{aligned}
 SD_x &= \sqrt{\frac{\sum x^2}{n} - \left(\frac{\sum x}{n}\right)^2} & SD_y &= \sqrt{\frac{\sum y^2}{n} - \left(\frac{\sum y}{n}\right)^2} \\
 &= \sqrt{\frac{38,03}{20} - \left(\frac{38,03}{20}\right)^2} & &= \sqrt{\frac{38,77}{20} - \left(\frac{38,77}{20}\right)^2} \\
 &= \sqrt{1,9015 - \left(\frac{1446,28}{400}\right)} & &= \sqrt{1,9385 - \left(\frac{1503,11}{400}\right)} \\
 &= \sqrt{1,9015 - 3,61} & &= \sqrt{1,9385 - 3,75} \\
 &= \sqrt{-1,7085} & &= \sqrt{-1,8115} \\
 &= 1,41 & &= 1,43
 \end{aligned}$$

3. Mencari Standar Deviasi Mean (SDm) tes Awal dan Akhir

$$\begin{aligned}
 SD_{MX} &= \frac{SD_x}{\sqrt{n-1}} & SD_{MY} &= \frac{SD_y}{\sqrt{n-1}} \\
 &= \frac{1,41}{\sqrt{20-1}} & &= \frac{1,43}{\sqrt{20-1}} \\
 &= \frac{1,41}{\sqrt{19}} & &= \frac{1,43}{\sqrt{19}} \\
 &= \frac{1,41}{4,36} & &= \frac{1,43}{4,36} \\
 &= 0,324 & &= 0,328
 \end{aligned}$$

4. Mencari Koefisien Korelasi

$$\begin{aligned}
 r_{xy} &= \frac{\Sigma xy}{\sqrt{(\Sigma x^2)(\Sigma y^2)}} \\
 &= \frac{36,13}{\sqrt{38,03 \times 38,77}} \\
 &= \frac{36,13}{\sqrt{1474,42}} \\
 &= \frac{36,13}{38,39} \\
 &= 0,94
 \end{aligned}$$

5. Mencari Standar Deviasi Perbedaan Mean (SD_{bm})

$$\begin{aligned}SD_{bm} &= \sqrt{(SD_{mx})^2 + (SD_{my})^2 - 2r_{xy} (SD_{mx}) (SD_{my})} \\&= \sqrt{(0,324)^2 + (0,328)^2 - 2 \times 0,94 (0,324) (0,328)} \\&= \sqrt{0,105 + 0,108 - 0,199} \\&= \sqrt{0,014} \\&= 0,11\end{aligned}$$

Lampiran 8.

Teknik Penghitungan t hitung

1. Mencari t-hitung (t_{hit})

$$\begin{aligned}t_{hit} &= \frac{M_x - M_y}{SD_{bm}} \\&= \frac{15,49 - 13,71}{0,11} \\&= \frac{1,78}{0,11} \\&= 15,9\end{aligned}$$

2. Mencari Nilai t Tabel

T Tabel dengan Derajat Kebebasan (DK) = $n - 1$ Pada taraf signifikansi:

$$\begin{aligned}df/db &= n - 1 \\&= 20 - 1 \\&= 19\end{aligned}$$

$$t \text{ Tabel} = 2,09$$

3. Menguji Nilai t Hitung Terhadap Nilai t Tabel dengan ketentuan Sebagai berikut :

- Jika $t_{hitung} \geq t_{tabel}$, maka H_0 ditolak
- Jika $t_{hitung} \leq t_{tabel}$, maka H_0 diterima
- Nilai $t_{hitung} = 15,9$ dan $t_{tabel} = 2,09$
- Nilai $t_{hitung} > t_{tabel}$ menunjukkan bahwa Hipotesa H_0 ditolak

Kesimpulan

Nilai $t_{hitung} = 15,9$ dan $t_{tabel} = 2,09$, berarti $t_{hitung} > t_{tabel}$

Berarti : “Dengan demikian Permainan Gobak Sodor dapat

Meningkatkan Kelincahan pada Atlet Taekwondo Dekade Klub Jakarta Timur”.