

**Latihan-2b Statistika**

60

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①  $\bar{X} = 75$

$$75 = \frac{85 + 65 + 77 + X + X}{5}$$

$$375 = 227 + 2X$$

∴ Rata-rata tes paling rendah  $\forall$  2 mata

$$375 - 227 = 2X$$

Pelajaran berikutnya adih 74.

$$148 = 2X$$

$$74 = X$$

↳

②  $n = 125$  ;  $\bar{X} = 32$

$$\bar{X}_b = 3X - 36$$

∴ Nilai rata-rata baru adih 60

$$= 3 \cdot 32 - 36 \rightarrow 96 - 36 = 60$$

↳

③  $\bar{X}_0 = \sum_{i=1}^n X_n$

$$\bar{X} = \frac{1}{n} \left( \frac{X_1}{3} + 2 + \frac{X_2}{3} + 2 + \frac{X_3}{3} + 2 \dots \frac{X_n}{3} + 2 \right)$$

$$= \frac{1}{n} \left( \frac{X_1}{3} + \frac{X_2}{3} + \frac{X_3}{3} + \dots \frac{X_n}{3} + 2n \right)$$

$$= \frac{1}{n} \left( \frac{1}{3} (X_1 + X_2 + X_3 + \dots + X_n) + 2n \right)$$

$$= \frac{1}{3} \frac{(X_1 + X_2 + X_3 + \dots + X_n)}{n} + \frac{2n}{n}$$

$$= \frac{1}{3} X_0 + 2$$

↳

④ 2 3 3 5 5 9 9 10  $\overset{5}{\circlearrowleft} X$   $\overset{7}{\circlearrowleft} X+2$   $\overset{2}{\circlearrowleft} X+3$

$$\bar{X} = 6 \rightarrow 6 = \frac{31 + 3X}{11}$$

2	8
3	9
3	9
5	10
5	
9	
9	
10	

$$66 - 31 = 3X$$

$$\text{Median} = \frac{1}{2} \cdot 11 = X_6 = 5$$

$$15 = 3X$$

$$\therefore \text{Median} = 5$$

$$5 = X$$

↳

5)  $\bar{x} = 25$  ; median = 25

$$25 = \frac{X_1 + X_2 + X_3}{3}$$

$$25 = \frac{X_1 + 25 + X_3}{3}$$

$$75 = X_1 + 25 + X_3$$

$$50 = X_1 + X_3$$

$$50 = X_1 + 8 + X_3$$

$$42 = 2X_1$$

$$21 = X_1$$

$$\text{Median} = \frac{1}{2} \cdot (n+1)$$

$$= \frac{1}{2} \cdot 4 = X_2 \rightarrow 25$$

$$J = X_3 - X_1 = 8$$

$$X_3 = 8 + X_1$$

maka,  $X_3 = 8 + 21 = 29$

∴  $X_3 / X_{\max} = 29$

6)  $n = 100$  ;  $\bar{x} = 3,7$  ; median = 5,5

$$\bar{x}_b = \frac{(3,7 + 6,5)}{2} = \frac{10,2}{2} = 5,1$$

$$\text{Median baru} = \frac{(5,5 + 6,5)}{2} = \frac{12}{2} = 6$$

7) Modus lama =  $X + 1200$

$$= 5 + 1200 = 1205$$

8)  $D_3 = 53$  ;  $n = 100$

$$n_{\text{baru}} = 100 \times 2 - 20 = 180$$

$$D_3 \text{ baru} = \frac{3}{10} (90 + 91) = \frac{3}{10} \times 181 = 54,3$$

9) 3 6 9 12 15 18 21 24 27 30

$$J_{\text{baru}} = X_{\max} - X_{\min} = 30 - 3 = 27$$

10)  $\bar{x} = 30$  ; median = 37 ;  $S_b = 12$

$$\bar{x}_b = 2X - 13 = 60 - 13 = 47$$

$$S_b = 2 \cdot 12 = 24$$

11) Data sebelumnya =  $X + 100$

Nilai	200	300	400	500	600
frekuensi	6	8	9	5	4

∴ Modus = 400