① Diketahui data

15 12 15 16 20 12

Tentukan :

a. Modus dari data diatas, dan jelaskan !

Jawab :

Modus data diatas adalah 12 dan 15. karena angka tersebut muncul 2kali 2kali (sering muncul).

b. Jumlah dari Median & kuartil 3 !

Jawab :

- Median

12 12 (15) (15) 16 20

$M = \frac{15+15}{2} = \frac{30}{2} = 15$

- Kuartil 3 (Q3)

Banyak data : 6

Data terkecil : 12

$Q_1 = \frac{n+1}{4} = \frac{6+1}{4} = \frac{7}{4} = 1{,}75 = 2 \quad Q_1 = 12$

$Q_2 = 2\left(\frac{n+1}{4}\right) = 2\left(\frac{6+1}{4}\right) = 2\left(\frac{7}{4}\right) = 2(1{,}75) = 3{,}5 = 3 = Q_2 = 15$

$Q_3 = 3\left(\frac{n+1}{4}\right) = 3\left(\frac{6+1}{4}\right) = 3\left(\frac{7}{4}\right) = 3(1{,}75) = 5{,}25 = 5 = Q_3 = 16$

② Tentukan selisih antara nilai tengah dgn jumlah kuartil 1 & 3 !

Jml Ketidakhadiran (Dalam Hari)	Frekuensi
1 - 3	15
4 - 6	12
7 - 9	7
10 - 12	5
13 - 15	1
Σ	40

Jawab

- Nilai tengah / median :

$\frac{40}{2} = 20$

Tb = 1 − 0,5 = 0,5

Fme = 15

Fkum = 0

P = 3

$Me = 0{,}5 + \left(\frac{15-0}{20}\right) \times 3$

$= 0{,}5 + \left(\frac{15}{20}\right) \times 3$

$= 0{,}5 + \left(\frac{3}{4}\right) \times 3$

$= 0{,}5 + 2{,}25$

$= 2{,}75$

$Q_1 = \frac{1}{4} \cdot 40 = 10$

$Tb = 0,5 \qquad f_1 = 15$

$f_k = 0 \qquad p = 3$

$$Q_1 = tb + \left(\frac{\frac{1}{4}n - f_k}{f_1}\right) \cdot p$$

$$= 0,5 + \left(\frac{\frac{1}{4} \cdot 40 - 0}{15}\right) \cdot 3$$

$$= 0,5 + \left(\frac{10}{15}\right) \cdot 3$$

$$= 0,5 + 2,01 = 2,51$$

$Q_3 = \frac{3}{4} \cdot 40 = 30$

$Tb = 6,5 \qquad f_i = 7$

$f_k = 12 \qquad p = 3$

$$Q_3 = tb + \left(\frac{\frac{3}{4}n - f_k}{f_i}\right) \cdot p$$

$$= 6,5 + \left(\frac{\frac{3}{4} - 30 - 12}{7}\right) \cdot 3$$

$$= 6,5 + \left(\frac{\frac{3}{4} \times 18}{7}\right) \cdot 3$$

$$= 6,5 + \left(\frac{18}{7}\right) \cdot 3$$

$$= 6,5 + 5,78$$

$$= 12,28$$