Ans

Exercise → 14.04

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Q1) i) Mean = $\frac{\text{Sum of all observations}}{\text{Total no. of observations}}$

$$= \frac{2+3+4+5+0+1+3+3+4+3}{10}$$

$$= \frac{28}{10} = 2.8$$

ii) Median = $\frac{\left(\frac{n}{2}\right)^{th} \text{ observation} + \left(\frac{n}{2}+1\right)^{th} \text{ observation}}{2}$

$$= \frac{\frac{10^{th}}{2} + \left(\frac{10}{2}+1\right)}{2}$$

$$= \frac{5_{th} + 6_{th}}{2}$$

$\frac{10+2}{2} = \frac{12}{2}$

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

$$= 3.$$

Mode =

0, 1, 2, 3, 3, 3, 3, 4, 4, 5

Mode = 3.

Q2> Mean = $\frac{41+39+48+52+46+62+54+40+96+52+98+40+42+52+60}{15}$

$= \frac{822}{15}$ 54.8

Median :-

$\left(\frac{n+1}{2}\right)$ th observation.

$\frac{16}{2}$ 8th observation.

= 52.

Mode :- 52

Q3) $63 = \frac{\left(\frac{n}{2}\right)^{th} \text{ observation} + \left(\frac{n}{2}+1\right)^{th} \text{ observation}}{2}$

$\therefore 63 = \frac{5\text{th observation} + 6\text{th observation}}{2}$

$63 = \frac{x + x+2}{2}$

$63 = \frac{2x+2}{2}$

$\frac{2(x+1)}{2} = 63$

$x = 63-1 = 62$