

Solⁿ

Arranging the data in increasing order
23, 24, 25, 25, 25, 26, 26, 27, 27, 28, 28, 28, 28, 28, 28

no. of days = 15
 Total no over 15 days

$$\text{Mean} = \frac{23+24+25+25+25+26+26+27+27+28+28+28+28+28+28}{15}$$

$$= \frac{396}{15} = 26.4$$

Median $n = 15$ hence 8th item will be the median.
 = 27

Mode
 23 = 1, 24 = 1, 25 = 3, 26 = 2, 27 = 2, 28 = 6
 Since 28 occurs six times hence Mode = 28

Range
 lowest value = 23, highest value = 28
 Range = highest value - lowest value
 28 - 23 = 5

5. An athlete keeps a record in seconds of her training times for the 100 m race:
 14.0, 14.3, 14.1, 14.3, 14.2, 14.0, 13.9, 13.8, 13.9, 13.8, 13.8, 13.7,
 13.8, 13.8, 13.8

Solⁿ

Arranging it in increasing order.
 13.7, 13.8, 13.8, 13.8, 13.8, 13.8, 13.8, 13.8, 13.9, 14.0, 14.0, 14.1, 14.2,
 14.3, 14.3

no. of items = 15

$$\text{Mean} = \frac{13.7 + 13.8 + 13.8 + 13.8 + 13.8 + 13.8 + 13.8 + 13.9 + 13.9 + 14.0 + 14.1 + 14.2 + 14.3 + 14.3}{15}$$

$$= \frac{195.7}{15} = 13.046 \text{ sec.}$$

Median = $n = 15$

\therefore the 8th term will be the median
= 13.9 sec

Mode

13.7-1, 13.8-6, 13.9-2, 14.0-1, 14.1-1, 14.2-1, 14.3-2

Since 13.8 occurs the maximum times = 6

Hence 13.8 is the mode

Range = highest - lowest

$$= 14.3 - 13.7 = 0.6$$

6 The mean mass of the 11 players in a football team is 80.3 Kg. The mean mass of the team plus a substitute is 81.2 Kg. Calculate the mass of the substitute.

Solⁿ

Given

no. of players = 11

Mean = 80.3 Kg

no of players + substitute = 12

Mean = 81.2 Kg

To find - mass of substitute