

Exercise 14G

Question 4:

Arranging the heights of 9 girls in ascending order , we have 143.7, 144.2, 145, 146.5, 147.3, 148.5, 149.6, 150, 152.1 Here n=9, which is odd

∴ median =
$$\frac{1}{2}$$
(n + 1)th term
= $\frac{(9+1)}{2}$ th term
= value of 5th term
= 147.3

: median height =147.3 cm

Question 5:

Arranging the weights of 8 children in ascending order, we have 9.8, 10.6, 12.7, 13.4, 14.3, 15, 16.5, 17.2 Here , n=8 , which is even

$$\therefore \text{ median} = \frac{1}{2} \left[\left(\frac{n}{2} \right) \right] \text{ thterm} + \left(\frac{n}{2} + 1 \right) \text{ th term}$$

$$= \frac{1}{2} \left[\left(4 \text{ th term} + 5 \text{ th term} \right) \right] \left[\because n = 8 \right]$$

$$= \frac{1}{2} \left(13.4 + 14.3 \right)$$

$$= \left(\frac{1}{2} \times 27.7 \right) = 13.85$$

∴ median weight =13.85 kg

Question 6:

Arranging the ages of teachers in ascending order , we have 32, 34, 36, 37, 40, 44, 47, 50, 53, 54 Here, n =10, which is even

$$\therefore \text{ median} = \frac{1}{2} \left[\left[\left(\frac{n}{2} \right) \right] \text{ thterm} + \left(\frac{n}{2} + 1 \right) \text{ th term} \right]$$

$$= \frac{1}{2} \left[\left(5 \text{th term} + 6 \text{th term} \right) \right] \left[\because n = 10 \right]$$

$$= \frac{1}{2} \left(40 + 44 \right)$$

$$= \left(\frac{1}{2} \times 84 \right) = 42$$

:. median age =42 years

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