

Start Tasks — Answers



1. Q_1, Q_2, Q_3 for: 4, 6, 8, 10, 12, 14, 16.

Solution

$Q_2 = 10$ (middle)

Lower 4,6,8: $Q_1 = 6$

Upper 12,14,16: $Q_3 = 14$

2. Q_1, Q_2, Q_3 for: 3, 5, 7, 9, 11, 13, 15.

Solution

$Q_2 = 9$ (middle)

Lower 3,5,7: $Q_1 = 5$

Upper 11,13,15: $Q_3 = 13$

3. Q_1, Q_2, Q_3 for: 2, 4, 6, 8, 10, 12, 14, 16.

Solution

$Q_2 = (8 + 10)/2 = 9$

$Q_1 = (4 + 6)/2 = 5$

$Q_3 = (12 + 14)/2 = 13$

4. Q_1, Q_2, Q_3 for: 6, 7, 9, 11, 13, 15, 18, 20.

Solution

$Q_2 = (11 + 13)/2 = 12$

$Q_1 = (7 + 9)/2 = 8$

$Q_3 = (15 + 18)/2 = 16.5$

5. Q_1, Q_2, Q_3 for: 5, 6, 8, 10, 13, 14, 17.

Solution

$Q_2 = 10$ (middle)

Lower 5,6,8: $Q_1 = 6$

Upper 13,14,17: $Q_3 = 14$

6. Q_1, Q_2, Q_3 for: 9, 11, 12, 15, 18, 21, 24, 27.

Solution

$Q_2 = (15 + 18)/2 = 16.5$

$Q_1 = (11 + 12)/2 = 11.5$

$Q_3 = (21 + 24)/2 = 22.5$

Start Tasks — Answers



7. IQR for: 5, 8, 10, 12, 14, 17, 20.

Solution

$$Q_1 = 8, Q_3 = 17$$

$$\text{IQR} = 17 - 8 = 9$$

8. IQR for: 12, 14, 16, 18, 20, 22, 24, 26.

Solution

$$Q_1 = 15, Q_3 = 23$$

$$\text{IQR} = 23 - 15 = 8$$

9. $Q_1 = 9$, $Q_3 = 21$. Find the IQR.

Solution

$$\text{IQR} = Q_3 - Q_1$$

$$= 21 - 9 = 12$$

10. $Q_1 = 14$, $Q_3 = 32$. Find the IQR.

Solution

$$\text{IQR} = Q_3 - Q_1$$

$$= 32 - 14 = 18$$

11. What part of the data lies between Q_1 and Q_3 ?

Solution

The middle half
(50%) of the data.

12. What part of the data lies below Q_1 ?

Solution

The lowest quarter
(25%) of the data.

Start Tasks — Answers



13. Box: min 4, $Q_1 = 8$, med 11, $Q_3 = 15$, max 19. Find the IQR.

Solution

$$\begin{aligned}\text{IQR} &= Q_3 - Q_1 \\ &= 15 - 8 = 7\end{aligned}$$

14. Box: min 10, $Q_1 = 14$, med 18, $Q_3 = 23$, max 30. State Q_1 , Q_3 .

Solution

$$\begin{aligned}Q_1 &= 14 \\ Q_3 &= 23\end{aligned}$$

15. Box: min 6, $Q_1 = 9$, med 13, $Q_3 = 18$, max 22. State the median.

Solution

Median = 13
(the middle mark).

16. Box: min 2, $Q_1 = 7$, med 10, $Q_3 = 16$, max 20. State the maximum.

Solution

Maximum = 20
(the top whisker).