

- 1 Fifty students take part in a quiz.
The table shows the results.

Number of correct answers	5	6	7	8	9	10	11	12
Number of students	4	7	8	7	10	6	5	3

- (a) How many students had 6 correct answers?

Answer(a).....7 [1]

- (b) How many students had less than 11 correct answers?

$$4 + 7 + 8 + 7 + 10 + 6 = 42$$

Answer(b).....42 [1]

- (c) Find

- (i) the modal number of correct answers,

Answer(c)(i).....9 [1]

- (ii) the median number of correct answers,

$$\begin{aligned} \text{Total students} &= 4 + 7 + 8 + 7 + 10 + 6 + 5 + 3 \\ &= 50 \end{aligned}$$

$$\text{Median} = \frac{\text{student 25} + \text{student 26}}{2} = \frac{8 + 8}{2} = 8$$

Answer(c)(ii).....8 [2]

- (iii) the mean number of correct answers.

$$\begin{aligned} \bar{x} &= \frac{5 \times 4 + 6 \times 7 + 7 \times 8 + 8 \times 7 + 9 \times 10 + 10 \times 6 + 11 \times 5 + 12 \times 3}{50} \\ &= \frac{415}{50} \\ &= 8.3 \end{aligned}$$

Answer(c)(iii).....8.3 [3]

- (d) A bar chart is drawn to show the results.

The height of the bar for the number of students who had 5 correct answers is 2 cm.
What is the height of the bar for the number of students who had 9 correct answers?

$$4 \text{ students} = 2 \text{ cm}$$

$$10 \text{ students} = x$$

$$\frac{4}{10} = \frac{2}{x}$$

$$4x = 20$$

$$x = \frac{20}{4}$$

$$x = 5$$

Answer(d).....5 [2]