Reviewing numerical displays and summary statistics

6 questions | 16 marks

Equivalent correct methods earn the corresponding marks.

1. Find the mean, median, mode and range of 5,6,6,7,11. [4 marks]

Total 35; $35 \div 5 = 7$.

Middle value 6; 6 occurs twice; $11 - 5 = 6$.

Answer: Mean 7; median 6; mode 6; range 6.

2. How many students read at least 3 books in the supplied table? [2 marks]

Example data: books read in one week

Books	Frequency
0	1
1	2
2	4
3	2
4	1

Add frequencies for 3 and 4 books: $2 + 1 = 3$.

Answer: 3 students.

3. Find the median books read from the supplied table. [2 marks]

Example data: books read in one week

Books	Frequency
0	1
1	2
2	4
3	2
4	1

The fifth and sixth observations are both 2.

Answer: 2 books.

4. A stem-and-leaf display has rows $1 \mid 2\ 4\ 6$ and $2 \mid 0\ 3$, with key $1 \mid 2 = 12$. List the data and range. [3 marks]

Read place values from the key; $23 - 12 = 11$.

Answer: 12,14,16,20,23; range 11.

5. Choose a display for rainfall measured daily across a fortnight. Explain. [2 marks]

Ordered time allows day-to-day change to be seen.

Answer: A line graph with day horizontally and rainfall in millimetres vertically.

6. Columns for counts 45 and 50 start their vertical axis at 40. Explain the distortion. [3 marks]

Use a zero baseline for fair column-height comparisons.

Answer: Displayed heights 5 and 10 make 50 look twice 45, although actual counts differ by only 5.