Frequency tables and suitable graphs

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Make a frequency table for 1, 2, 2, 3, 3, 3, 4, 4. [2 marks]

Frequency table

Score	Frequency
1	1
2	2
3	3
4	2

Count each score once.

The frequencies total 8.

Answer: 1:1, 2:2, 3:3, 4:2.

2. Using the travel table, how many more students walk than travel by car? [2 marks]

Travel to school: teaching data for 20 students

Method	Frequency
Walk	8
Bus	6
Cycle	4
Car	2

$8 - 2 = 6$.

Answer: 6 students.

3. Using the travel table, what fraction of the students cycle? Give a simplest fraction. [2 marks]

Travel to school: teaching data for 20 students

Method	Frequency
Walk	8
Bus	6
Cycle	4
Car	2

4 of 20 cycle.

$\frac{4}{20} = \frac{1}{5}$.

Answer: $\frac{1}{5}$.

4. Choose a display for favourite school subjects: a bar graph or line graph. Explain. [2 marks]

School subjects are categories, so separate bars compare their frequencies.

Answer: A bar graph.

5. Frequencies are 5, 7, 3 and one missing frequency. There are 21 responses. Find the missing frequency. [2 marks]

Known frequencies total $5 + 7 + 3 = 15$.

$21 - 15 = 6$.

Answer: 6.

6. A student draws the “Cycle” bar twice as wide as the others. Why could this mislead? [2 marks]

Use equal bar widths and compare heights on the same frequency scale.

Answer: Its extra area can make the category look more important than its frequency justifies.