Test - Statistics: scatter graphs and averages

Year: Year 8 · Duration: 45 minutes · /20

Name:	Date:	**Mark: /20**

Question	1	2	3	4	5	Total
marks	4	4	4	4	4	**20**
Mark						

Show your working.

Question 1 (4 marks)

Question 1 – Averages

Answer all parts. Show your working.

a. Find the mean, median and mode of 5, 8, 8, 9, 12, 14. (3 marks)
b. Find the range. (1 mark)

Question 2 (4 marks)

Question 2 – Frequency table

Thirty pupils were asked how many siblings they have.

Siblings	0	1	2	3
Frequency	6	12	8	4

a. Find the mean number of siblings. (2 marks)
b. Find the median. (1 mark)
c. What is the modal number? (1 mark)

Question 3 (4 marks)

Question 3 – Pie chart

A pie chart shows 60 pupils who chose a school trip: zoo 25 pupils, museum 20, park 15.

a. Work out the angle for each destination. (3 marks)
b. Which sector is the largest? (1 mark)

Question 4 (4 marks)

Question 4 – Problem: scatter graph

The table shows the number of ice creams sold and the maximum temperature on eight days.

Temp (°C)	14	16	18	20	22	24	26	28
Sales	20	28	31	40	45	52	55	63

a. Describe the correlation. (1 mark)
b. Draw a line of best fit and estimate the sales at 21°C. (2 marks)
c. Explain why you should not use it to predict sales at 5°C. (1 mark)

Question 5 (4 marks)

Question 5 – Problem: outlier

Six pupils scored these marks in a quiz: 12, 14, 15, 15, 16, 48.

a. Find the mean and the median. (2 marks)
b. Which score is an outlier? (1 mark)
c. Which average is better to describe the data? Explain. (1 mark)