

Data and Scatter Graphs

ANSWERS

Ruler | 30 minutes | Total marks: 21

Name Class

1 Write one word from the box next to each type of data.

continuous

discrete

qualitative

the number of brothers and sisters a student has

discrete (1)

the height of a student

continuous (1)

the colour of a student's eyes

qualitative (1)

[3 marks]

2 Mia finds some data about rainfall on a website.

Is this primary data or secondary data?

Answer secondary (1)

[1 mark]

3 Here are the marks of 16 students in a test.

12 25 7 31 18 22 9 15
27 34 11 19 3 24 28 16

Complete the frequency table.

Mark	Tally	Frequency
0 to 9		3
10 to 19		6
20 to 29		5
30 to 39		2 (1)(1)(1)

Lose 1 mark for each wrong frequency

[3 marks]

4

The two way table shows how 30 students travel to school.

	Walk	Bus	Car	Total
Boys	8	5	3	16
Girls	5	7	2	14
Total	13	12	5	30

(a) Complete the two way table.

All six correct (1)(1)(1). Lose 1 mark for each error

[3 marks]

(b) What fraction of the 30 students walk to school?

Answer $\frac{13}{30}$ (1)

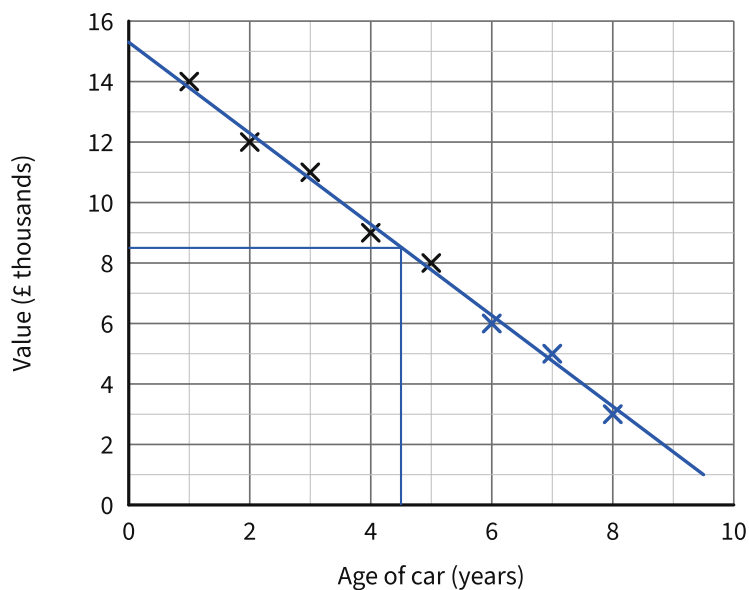
[1 mark]

5

The table shows the age and the value of eight cars of the same model.

Age (years)	1	2	3	4	5	6	7	8
Value (£ thousands)	14	12	11	9	8	6	5	3

The first five points have been plotted on the scatter graph.



(a) Plot the last three points.

[2 marks]

(b) Describe the correlation.

Answer negative (1)

[1 mark]

(c) Draw a line of best fit.

[1 mark]

(d) Use your line to estimate the value of a car that is 4.5 years old.

Answer £ 8.5 (1) accept 8 to 9 thousand

[1 mark]

(e) Explain why the line should not be used to estimate the value of a car that is 15 years old.

15 years is outside the range of the data (1)

[1 mark]

- 6 A scatter graph shows that on days when more ice creams are sold, more people get sunburnt.
Dan says, "Eating ice cream causes sunburn."
Explain why Dan is wrong.

Both go up because the weather is hot. One does not cause the other (1)

[1 mark]

- 7 Ali wants to find out the favourite sport of the students in his school.
He asks 5 of his friends.

- (a) Give one reason why his results may not be reliable.

The sample is too small, or his friends may all like the same sport (1)

[1 mark]

- (b) Design a data collection sheet Ali could use.

*a table with columns for Sport, Tally and Frequency (1)
at least three sports listed, or space for them (1)*

[2 marks]

Question	Topic	RAG
1	I know the types of data	
2	I know the difference between primary and secondary data	
3	I can complete a grouped frequency table	
4	I can complete and use a two way table	
5	I can draw and use a scatter graph	
6	I know that correlation does not show cause	
7	I can plan how to collect data	