

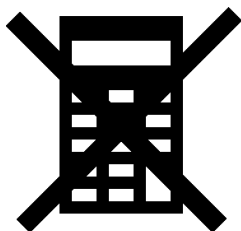
AQA, OCR, Edexcel

**GCSE**

# GCSE Maths

## Scatter Graphs

Name:



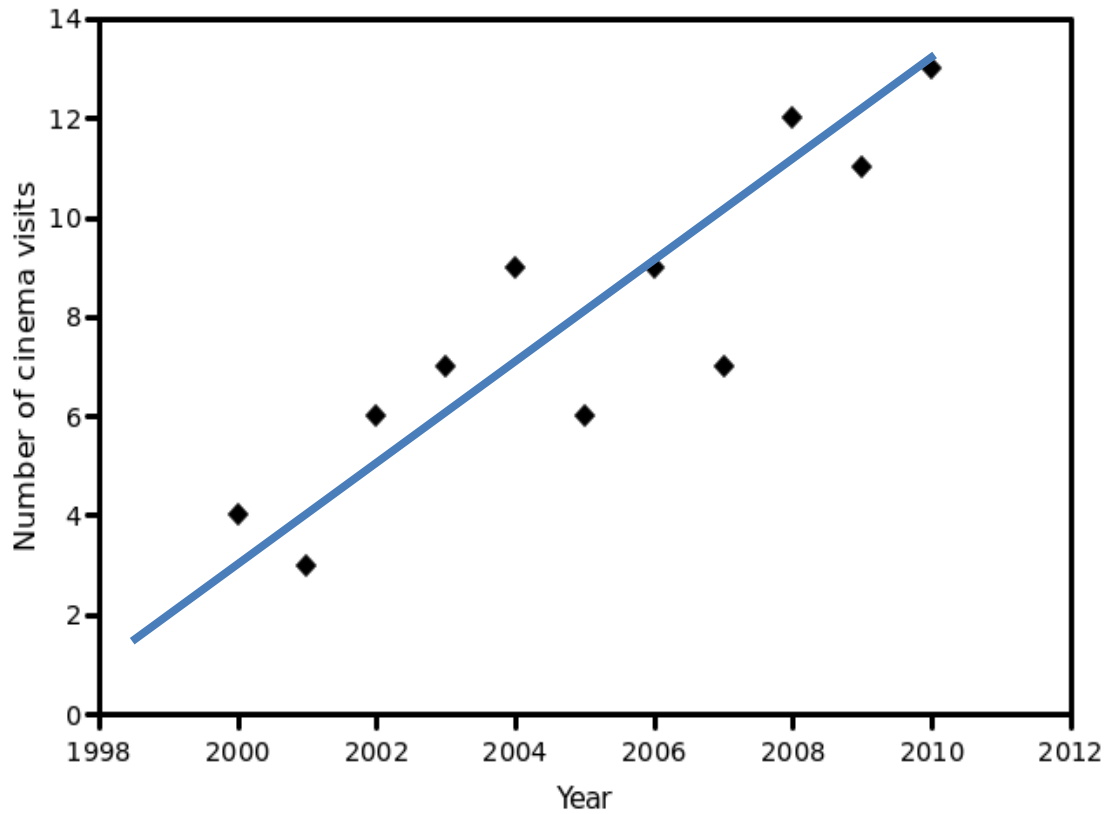
### Guidance

1. Read each question carefully.
2. Don't spend too long on each question.
3. Attempt every question.
4. Always show your workings.

Revise GCSE Maths:

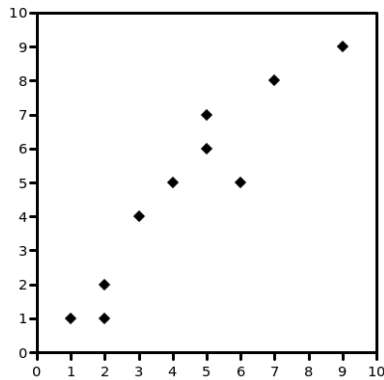
[www.MathsMadeEasy.co.uk/gcse-maths-revision/](http://www.MathsMadeEasy.co.uk/gcse-maths-revision/)

1. Draw a line of best fit for the data on the scatter graph below.

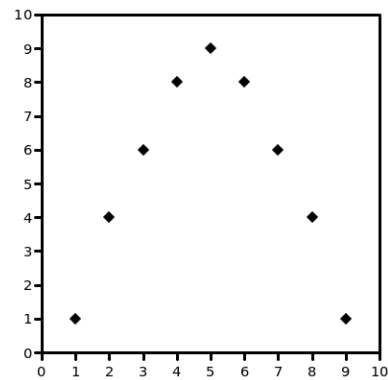


(1 mark)

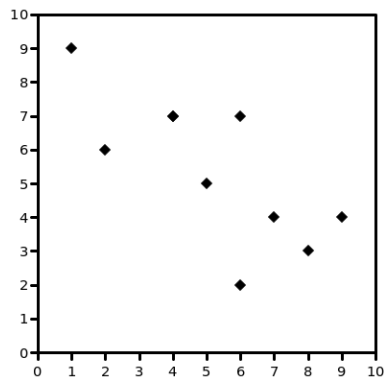
2. For each of the scatter graphs below, state whether they have weak positive, strong positive, weak negative, strong negative, or no correlation.



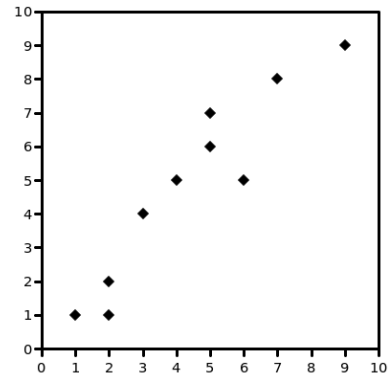
.....Strong Positive.....



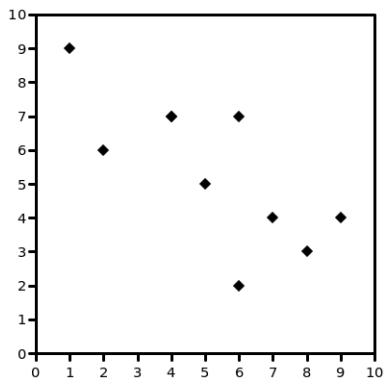
.....No Correlation.....



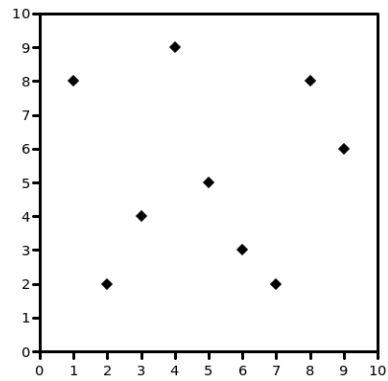
.....Weak negative.....



.....Strong Positive.....



.....Weak negative.....

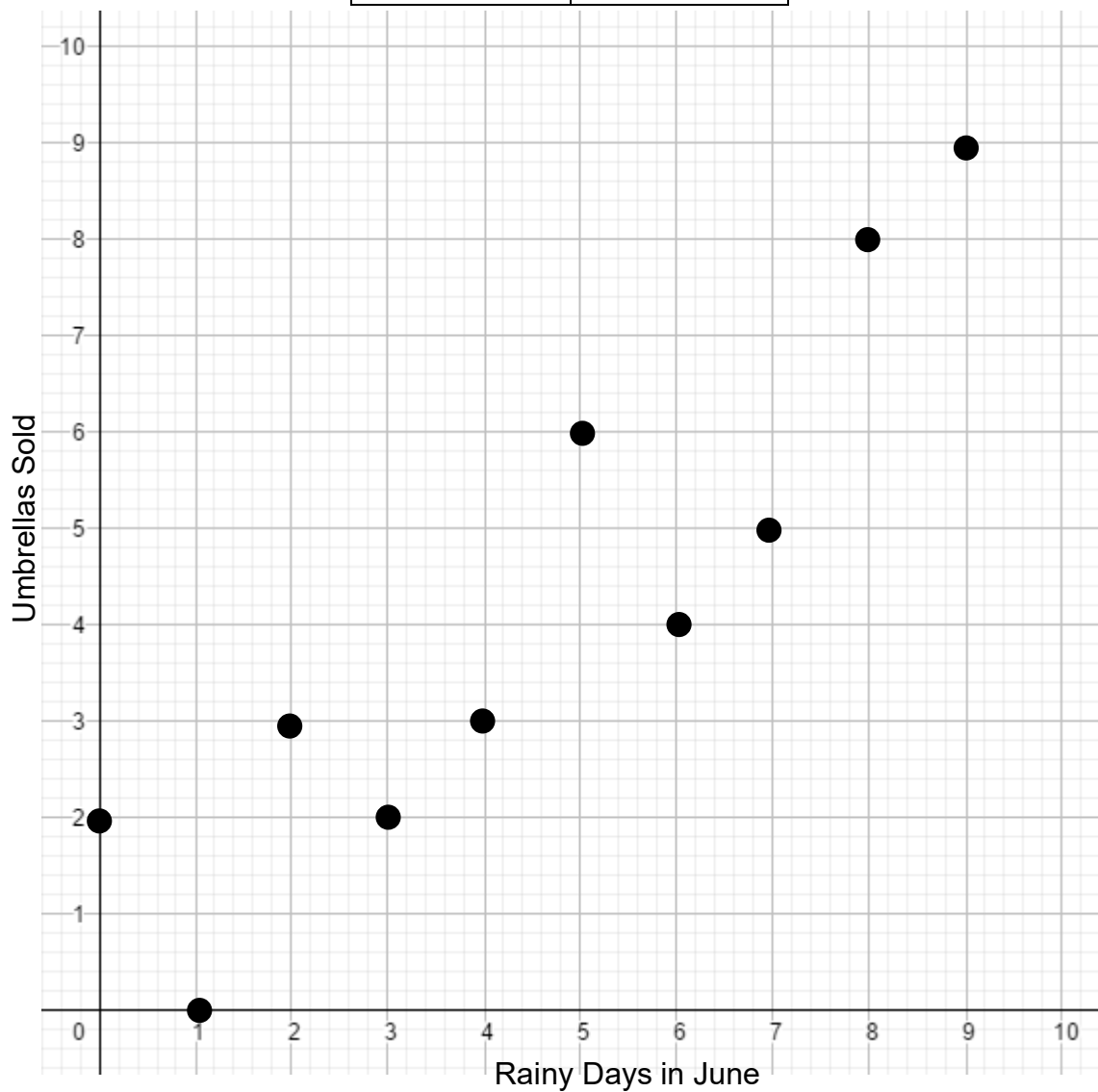


.....No Correlation.....

(6 marks)

3. Plot the following data as a scatter graph below, labelling your axis.

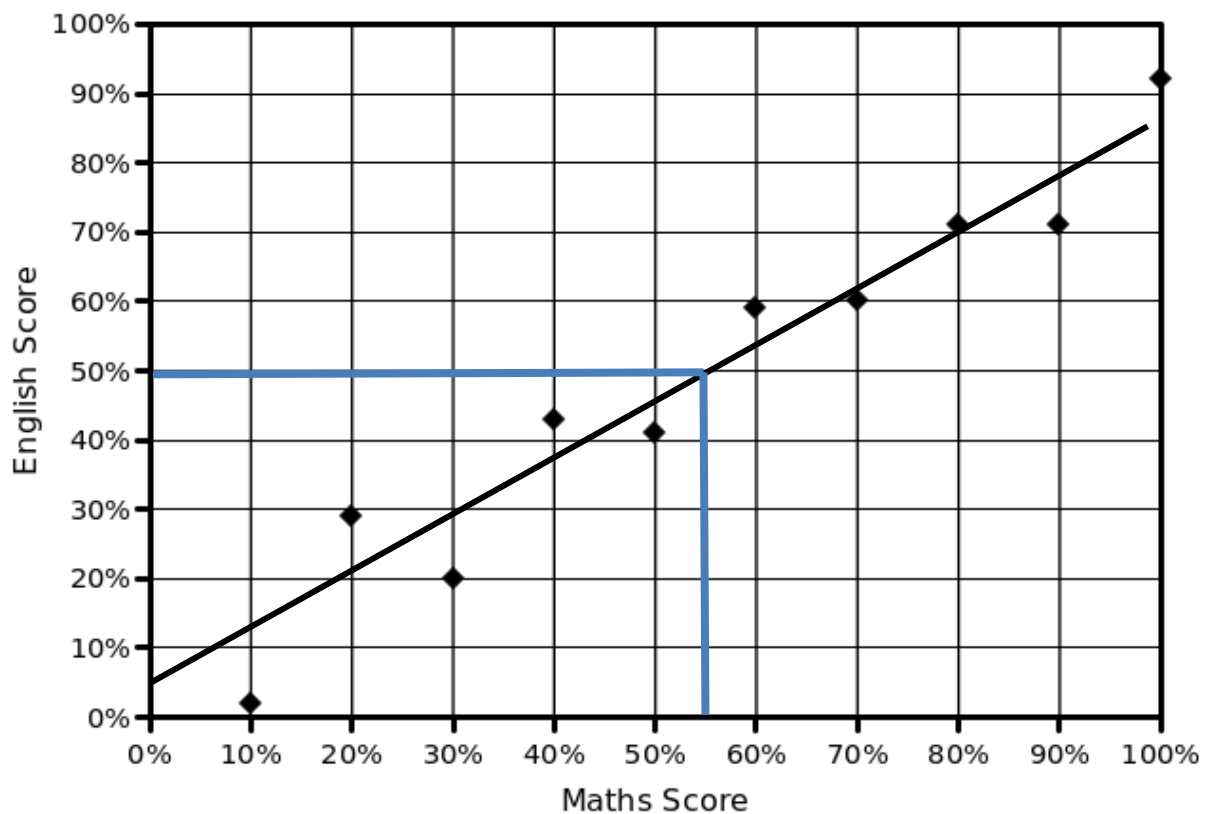
Rainy days in June	Umbrellas sold
9	9
5	6
6	4
3	2
2	3
7	5
8	8
1	0
4	3
0	2



(3 marks)

4. Maths and English test scores for 10 students in a class are plotted in a scatter graph.

Draw a line of best fit for the data on the graph below.



Another student in the class scores 55% on their maths test - what is their likely English score?

.....

Score = .....50%  $\pm$  5%.....

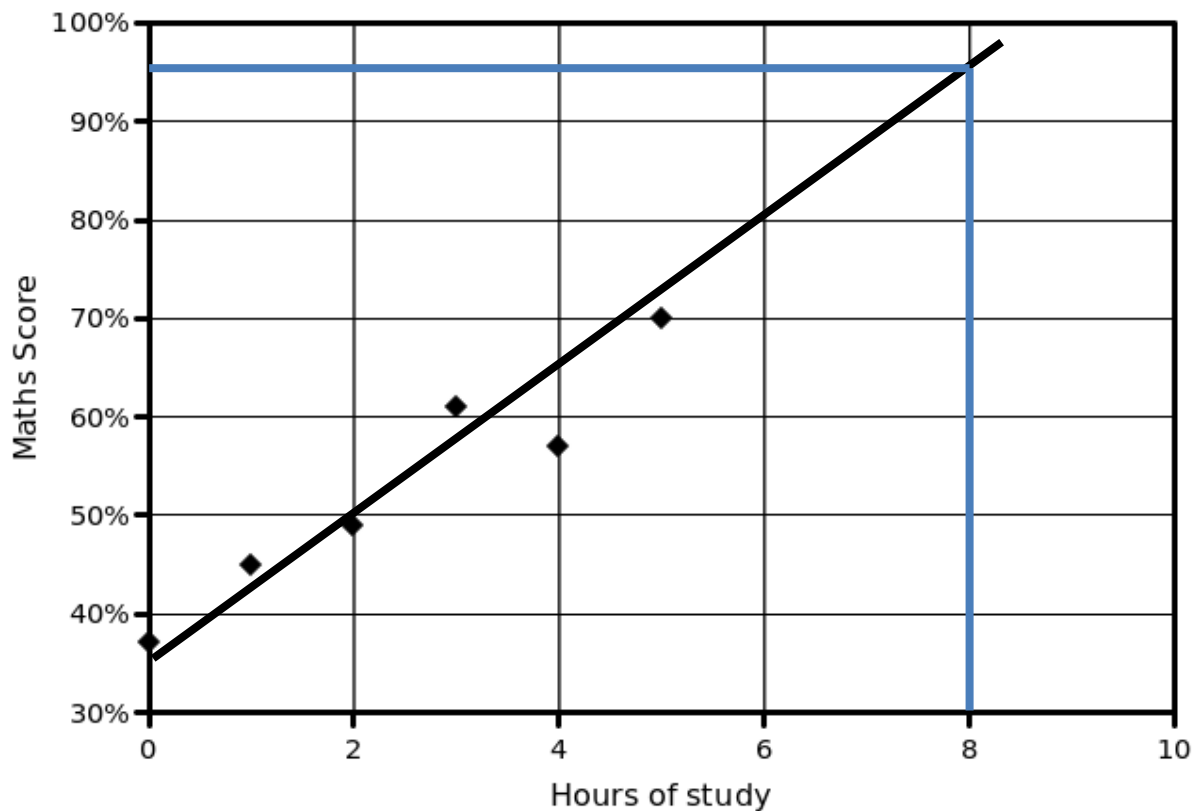
Why is this an appropriate approximation?

*The line of best fit doesn't give exact answers, but an approximation based off the other scores.*

(1 mark, 1 mark, 1 mark)

5. Kyle tests himself after each week of study. Each week he studies for a different number of hours and this affects the score he achieves.

Draw a line of best fit for his data on the graph below.



Based on the data, if Kyle studied for 8 hours in the next week, what would his score likely be?

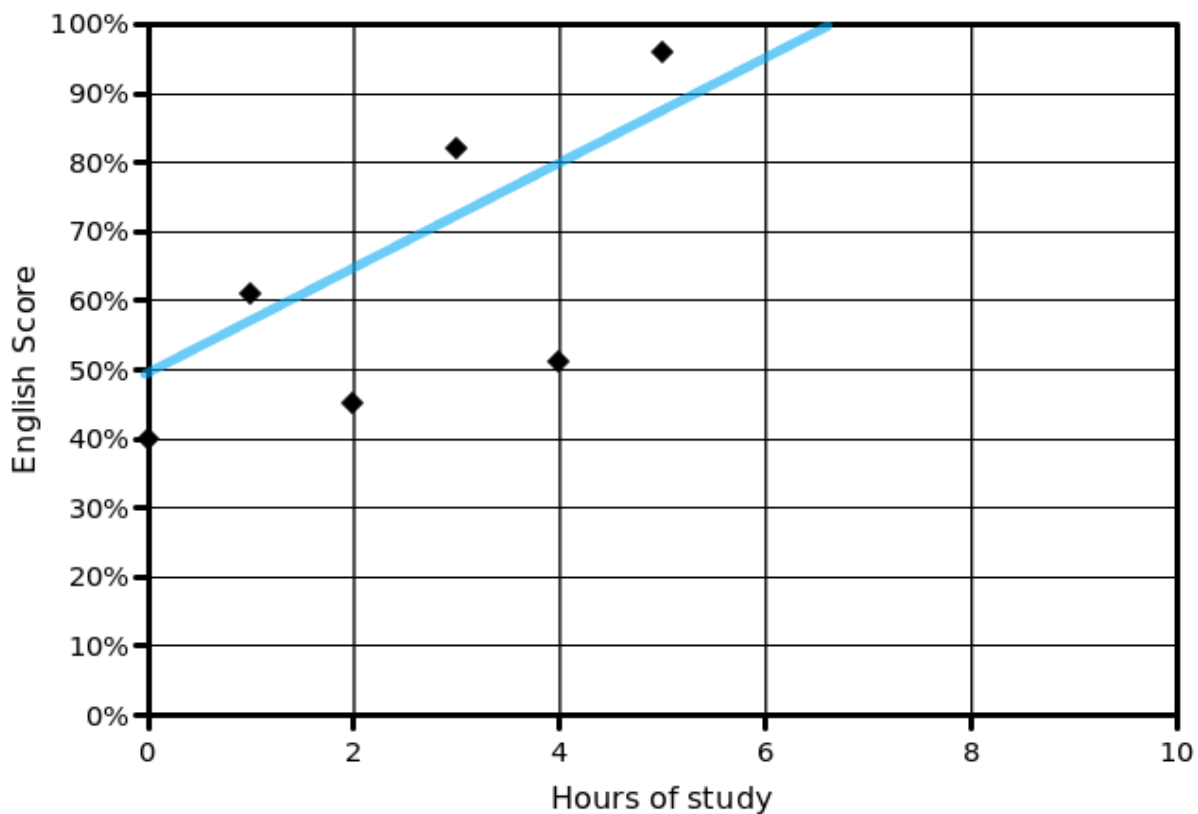
.....  
.....

Score = .....95% ± 5%...

(1 mark, 2 marks)

6. Kyle tests himself after each week of study for his English revision too. He looks at his data and draws a line of best fit. He says,

*“If I studied for 7 hours I would get 100% on my English Test.”*



State two reasons why his statement is inaccurate.

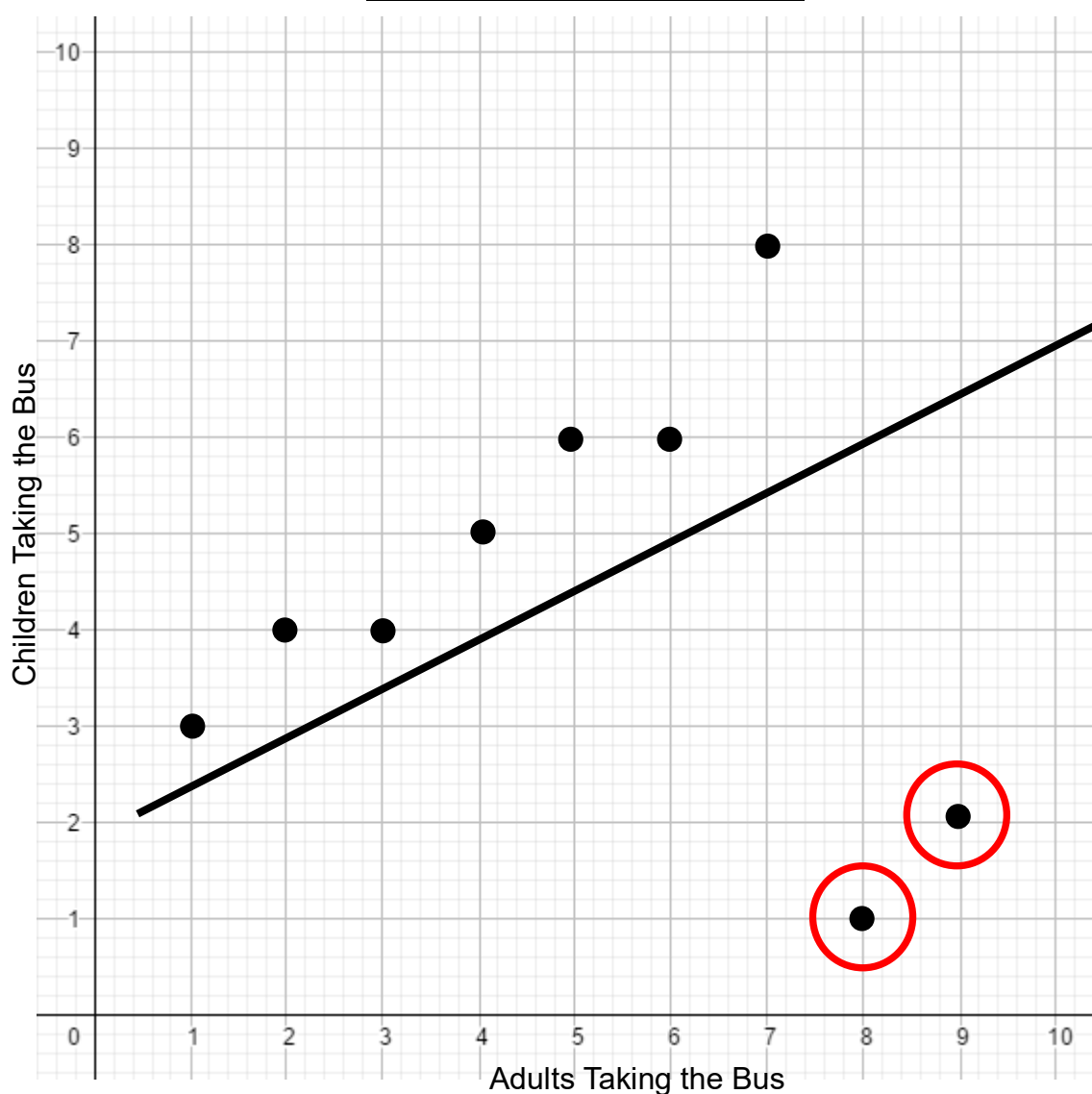
Reason: The line of best fit doesn't go up to 7 hours.

Reason: The line of best fit gives an estimate.

(2 marks)

7. Data is collected on adults and children taking the bus on several days.  
Plot the following data on the graph below and add a line of best fit, labelling axis.

Adults taking the bus	Children taking the bus
4	5
7	8
1	3
8	1
2	4
9	2
3	4
5	6
6	6
6	6





Visit <http://www.mathsmadeeasy.co.uk/> for more fantastic resources.

Circle the two outliers on your plot.

If the two outliers were removed, what would happen to:

The line of best fit:

*The line of best fit would be steeper, closer to the majority of points.*

The correlation of the data:

*The correlation would remain positive, but be much stronger.*

(3 marks, 1 mark, 2 marks)