

Summer Term Maths Year 10

Day
4

Week 10

Use scatter graphs to find correlation and estimate values

1 Complete these sentences,

a) Positive correlation exists when one variable increases as the other variable increases.

b) Negative correlation exists when one variable increases as the other variable decreases.

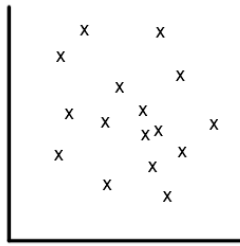
2 For each graph below, state the type of correlation shown.



Negative



Positive



No Correlation

3 Decide if the following statements are true or false:

a) The line of best fit must go through the origin.

True False

b) The line of best fit should go through as many points as possible but must be a single straight line.

True False

c) The line of best fit should extend across the whole graph.

True False

d) Strong correlation exists when all data points are close to the line of best fit.

True False

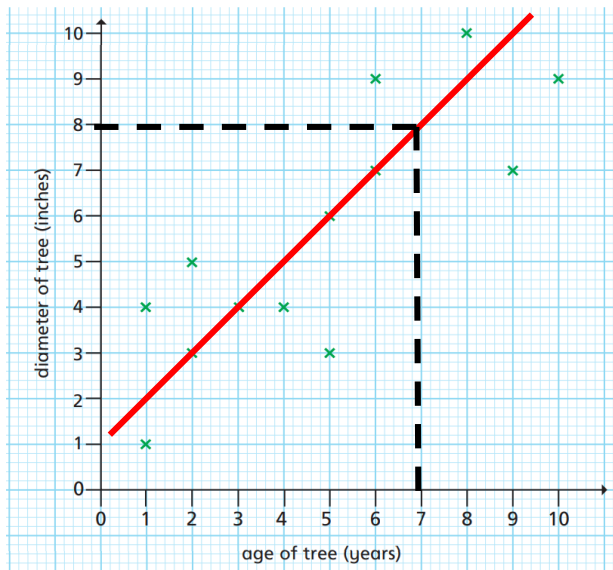
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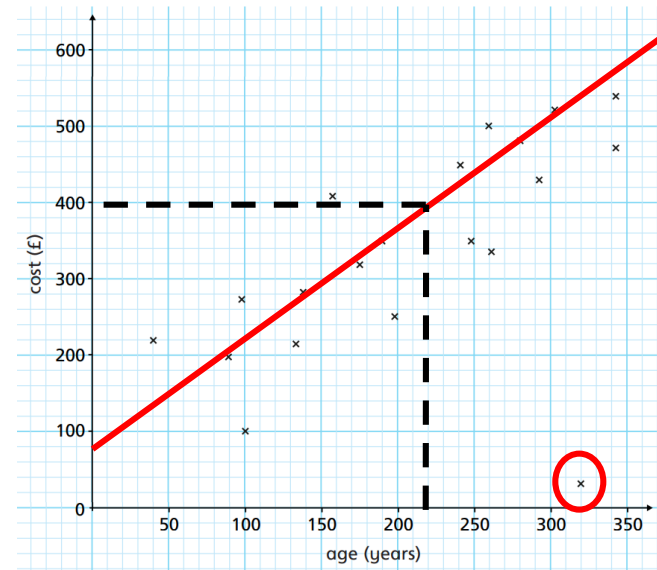
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- 4** Here is the scatter graph for the age of a tree and the diameter of its trunk.



- Draw the line of best fit.
- Describe the type of correlation this graph shows. **positive**
- Estimate the age of a tree that has a diameter of 8 inches. **7 years**

- 5** The scatter graph shows the cost in pounds of some rare books.



- Circle the outlier on the graph. Give a possible reason for the outlier. **Book in poor condition/other reasons**
- Estimate the cost of a book that is 220 years old. **£400**