

Functions and Evidence from Data

Grades 9-12 Name: _____ Date: _____

Context and evidence

A tutoring programme records hours attended x and average score gain y : (2,3), (4,7), (6,10), (8,13).

Your investigation

1. Sketch a scatter plot and describe direction, form and strength.

2. Find a reasonable linear model and interpret its slope in context.

3. Use the model to estimate the gain at 10 hours. Show your method.

4. Explain why the data do not prove that tutoring alone caused the gains.

5. Write a cautious two-sentence conclusion that includes the sample limitation and one further variable to study.

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Learning goals

Reason accurately, use evidence, show a method and communicate a defensible conclusion.

Response guidance

Reward defensible modelling, contextual interpretation and caution about causation. Models may vary slightly; reasoning matters more than an exact line.

1. Sketch a scatter plot and describe direction, form and strength.
2. Find a reasonable linear model and interpret its slope in context.
3. Use the model to estimate the gain at 10 hours. Show your method.
4. Explain why the data do not prove that tutoring alone caused the gains.
5. Write a cautious two-sentence conclusion that includes the sample limitation and one further variable to study.

Extension and assessment

Ask learners to compare methods, revise one response after feedback and identify the evidence that most changed their thinking.