Direction/strength/form of association

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Describe the association for $(1, 9)$, $(2, 7)$, $(3, 5)$, $(4, 3)$, $(5, 1)$. [2 marks]

Every increase of 1 in x gives a decrease of 2 in y.

All points lie on $y = 11 - 2x$.

Answer: Perfect negative linear association.

2. Describe $(1, 3)$, $(2, 8)$, $(3, 2)$, $(4, 7)$, $(5, 4)$. [2 marks]

The responses alternate rather than consistently rise or fall.

Five points alone offer limited evidence.

Answer: No clear linear direction; the points are scattered.

3. Can a curved pattern be strong? Give a reason. [2 marks]

Strength means closeness to a pattern.

Points may lie very close to a curve.

Answer: Yes.

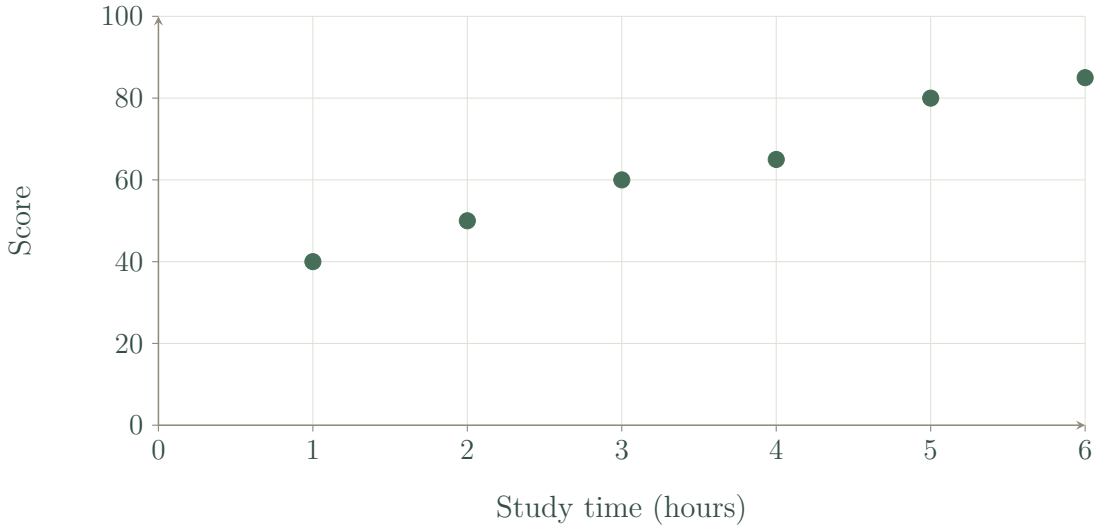
4. A graph changes from metres to centimetres on one axis. Does that alone strengthen the association? [2 marks]

Only the unit scale changes.

The underlying paired observations and relative pattern are unchanged.

Answer: No.

5. Describe the supplied study-time plot using all three features. [2 marks]



Scores generally rise with study time.

There is some scatter around a roughly straight trend.

Answer: Positive, quite strong, approximately linear association.

6. A single point lies far from the main pattern. State two sensible next steps. [2 marks]

An unusual point is not automatically wrong.

Report and justify any later exclusion.

Answer: Check the recording/measurement and investigate its context.