

Solutions

Marking: **M1** a correct method, **A1** the correct answer.

Each answer shows the steps, then the **result**.

2.1

- as one variable increases so does the other

positive correlation

2.2

- to estimate the value of one variable from a known value of the other

2.3

- the pattern shown by the data may not continue outside the range that was measured — this is extrapolation

3.1

(a)

- rising to the right is positive
- the points lying CLOSE to the line makes it strong, so: **strong positive correlation**

(b)

- find 6 hours on the horizontal axis and read straight up to the line of best fit
- then read across to the score axis; the estimate is the value there

(c)

- correlation shows only that the two vary together, not that one produces the other
- a third factor could explain both — for example a student who is more motivated may both revise more AND pay more attention in class

3.2

- **negative correlation**
- as a car gets older its value generally falls, so the two move in opposite directions