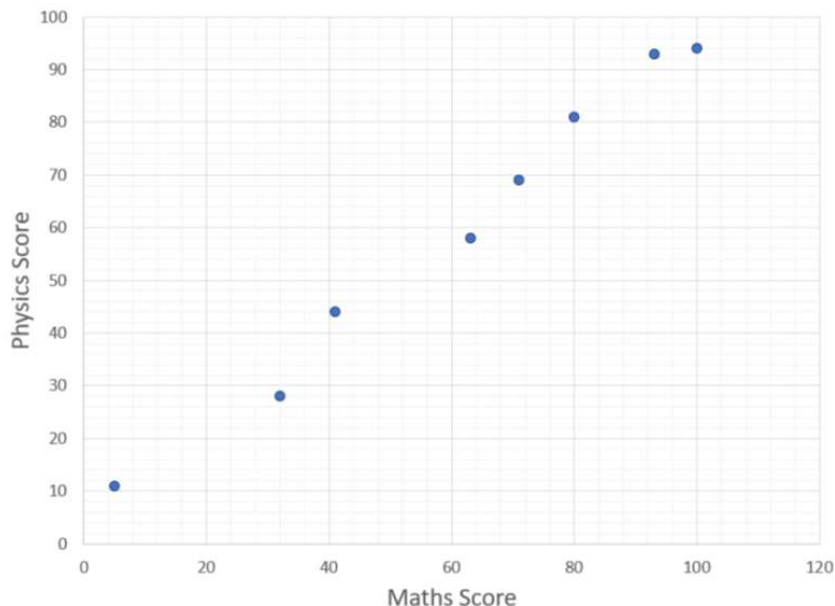# *Scatter Graphs*

1. The graph shows a comparison of some pupils Physics scores vs their Maths scores in a Prelim examination.
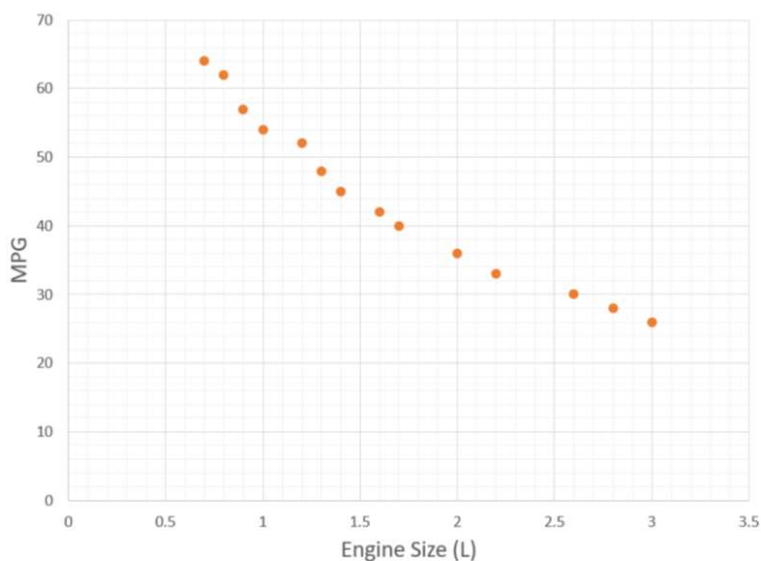


(a) Draw a line of best fit on the graph.
(b) What type of correlation does this graph have?
(c) Neil scored 50 in Maths, what would his estimate in Physics be?
(d) Amy scores 90 in Physics and thinks she would score Higher in Maths. Is she correct?

2. This graph shows the weight vs height of a sample of people.
(a) What was the lowest weight?
(b) What was the tallest height?
(c) Draw a line of best fit.
(d) Use your line to estimate the weight of someone who is 1.2m.
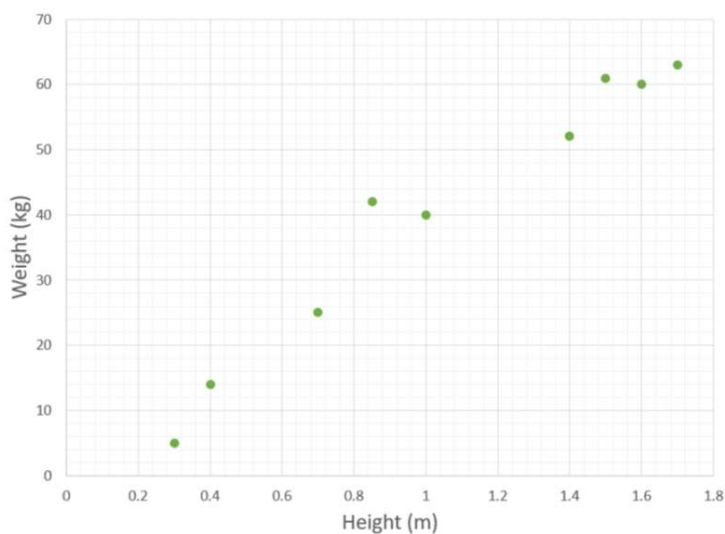
3. The graph below shows the relationship between the Engine size of a car and the miles per gallon of fuel.



(a) Draw a line of best fit for the graph.
(b) What type of correlation does this graph have?
(c) Use your line to estimate the MPG for a 1.8L car.
(d) Why do you think there are there no numbers below 0.5L?

4. A shop records the sales of sun tan lotion compared to the temperature. They plot the results on this scattergraph.
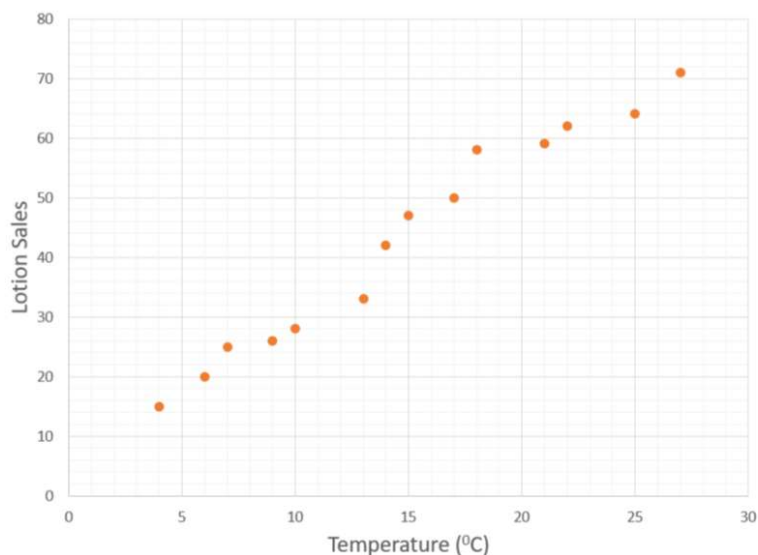


(a) Draw a lone of best fit on the diagram.
(b) Explain the general trend of the graph.
(c) Use your line to estimate the sales if it was 12⁰C.
(d) What would you expect the sales of lotion to be at 0⁰C?
(e) How could they increase sales during colder weather?

5. The graph below show pupils test scores measured against their average daily time on their mobile phones.
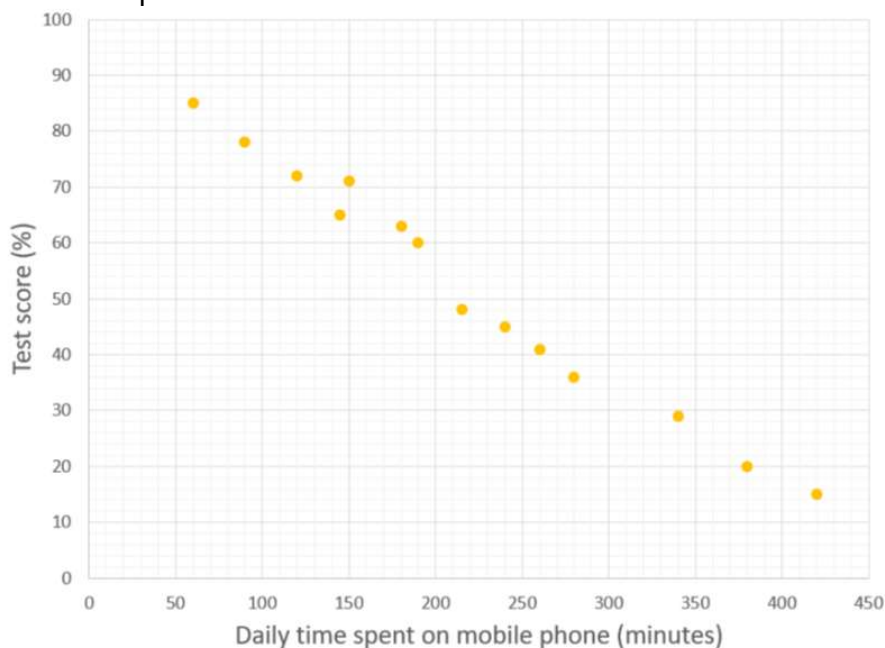


(a) Draw a line of best fit on the diagram.
(b) How did time on the mobile phone affect the score?
(c) If someone spent an average of 5 hours per day using their phone, what would their estimated score be?
(d) How could someone improve their score?

6. For each question below, plot a scatter graph and draw a line of best fit.

(a) Height of a plant.

| Days | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Height | 1.6 | 1.9 | 2.4 | 3.3 | 3.5 | 3.8 | 4.0 | 4.4 |

(b) Coordinates on a graph.

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| y | 4 | 6 | 7.5 | 10.5 | 12 | 13.5 | 16 |

(c) Temperature in an experiment.

| Time (mins) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Temp($^0$C) | 85 | 72 | 65 | 58 | 46 | 32 | 25 | 20 |