## Knox Academy Mathematics Department

## 4 Question Challenge on...

## Scattergraphs

Q1 The graph below shows the relationship between the number of doctors per 10000 of population and life expectancy in seven countries.

doctors
(a) Draw the line of best fit onto the diagram.
(b) Use your line to estimate life expectancy in a country with 80 doctors.

Q2 The graph shows the height above sea-level, in metres, of eight places in Scotland and the corresponding temperatures.

(a) Draw a line of best fit through the points on the graph.
(b) Use your line of best fit to estimate the temperature of a place which is 800metres above sea-level.

Q3 The table below shows the results of an experiment to test the relationship between intelligence and reading speed (words per minute) in a group of 8 year olds.

| Intelligence(IQ) | 95 | 105 | 115 | 125 | 135 | 140 | 150 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reading Speed | 10 | 20 | 25 | 25 | 40 | 35 | 50 |

(a) Complete the scatter graph below to illustrate this.

(b) Draw the line of best fit on your graph.

Q4 The graph shows the arm span and height of 10 people.
(a) Draw a line of best fit on the diagram.

(b) Use your line of best fit to estimate the height of a person who has an arm span of 170 cm .

