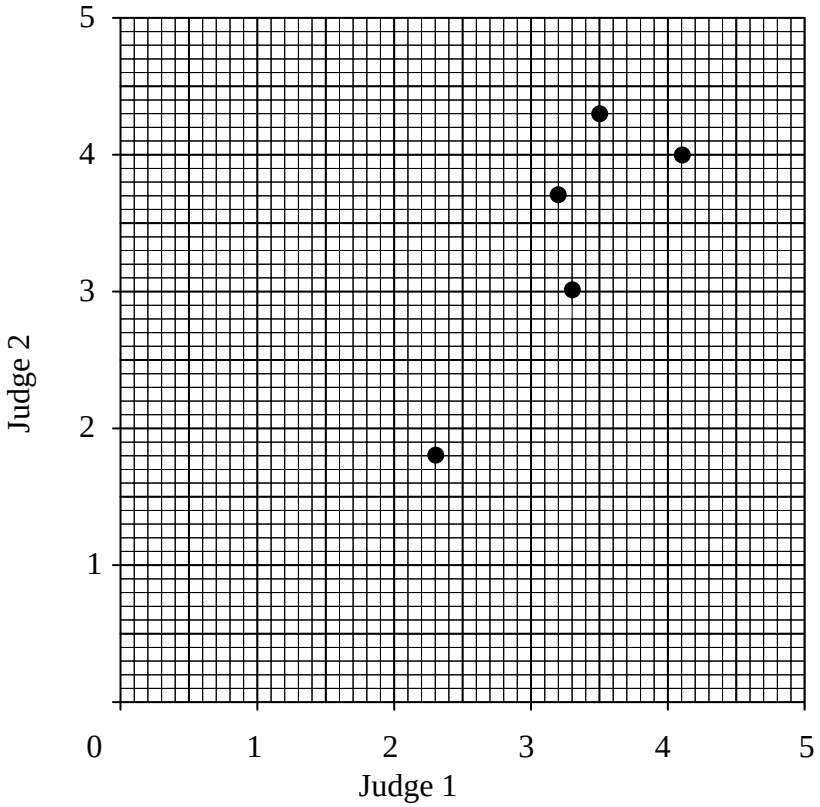
Scattergraphs

1. Two judges, Judge 1 and Judge 2, were scoring athletes in a competition. Each judge awarded points out of 5.

The scattergraph shows the marks for five out of the seven athletes who took part.



(a) Helen was given a score of $4 \cdot 3$ by Judge 1 and $4 \cdot 6$ by Judge 2. Mark Helen's score with an **X** on the scattergraph.

(b) **Draw a line of best fit** on the scattergraph.

(c) John was scored $3 \cdot 7$ by Judge 1.

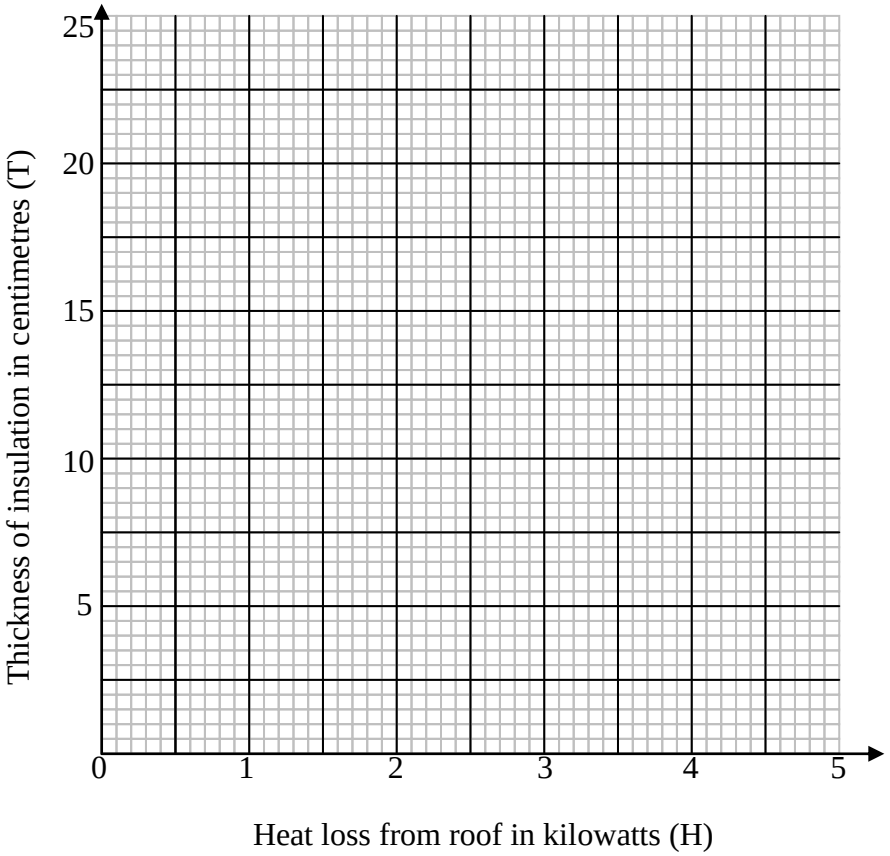
From your line of best fit, estimate the score that Judge 2 may have awarded him. [1, 1, 1]

2. The table below shows the connection between the thickness of insulation in a roof and the heat lost through the roof.

Heat loss in kilowatts (H)	1·5	1·8	3	4	4·4	4·6
Thickness in cm (T)	22·5	18	10	11	6·5	2·5

Q2. continued

(a) Draw a scatter diagram on the graph below.



(b) Draw the best fitting straight line through the points.

(c) Use your graph to estimate the heat loss from 15 centimetres of insulation. [2, 1, 1]

3. The following table gives the temperature of a bottle of water as it is heated.

Time (mins) **T**	1	3	5	7	9
Temp (°C) **C**	20	23	27	31	36

(a) Plot the information on a graph and draw a line of best fit.

(b) Use your graph to estimate the temperature after 6 minutes. [4, 1]

[12 marks]