

Scattergraphs and Lines of Best Fit

1) The table below shows the heights of ten boys in a class, and the distance each was able to throw a cricket ball.

Height (cm)	122	124	133	138	144	156	158	161	164	168
Distance thrown (m)	41	38	52	56	39	54	59	61	63	67

- Draw a scattergraph to show this data, and draw a line of best fit on your scattergraph.
- Find the gradient of your line of best fit. What does this gradient tell you?
- Write down the equation of your line of best fit in the form $y = mx + c$
- Use your equation to estimate the distance that would be thrown by a boy 150cm tall.

2) In an experiment, 7 fields were planted with the same crop, but each treated with a different amount of water. The table below shows, for each field, the amount of water supplied, and the eventual crop yield.

Amount of Water (kl)	12	18	24	30	36	42	48
Crop yield (kg)	5270	5680	6250	7210	8020	8710	8420

Repeat parts (a)-(c) of Q1.

- Use your equation to estimate the yield if (i) 33kl of water is supplied (ii) 100kl of water is supplied. Do you think these estimates are reasonable?

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