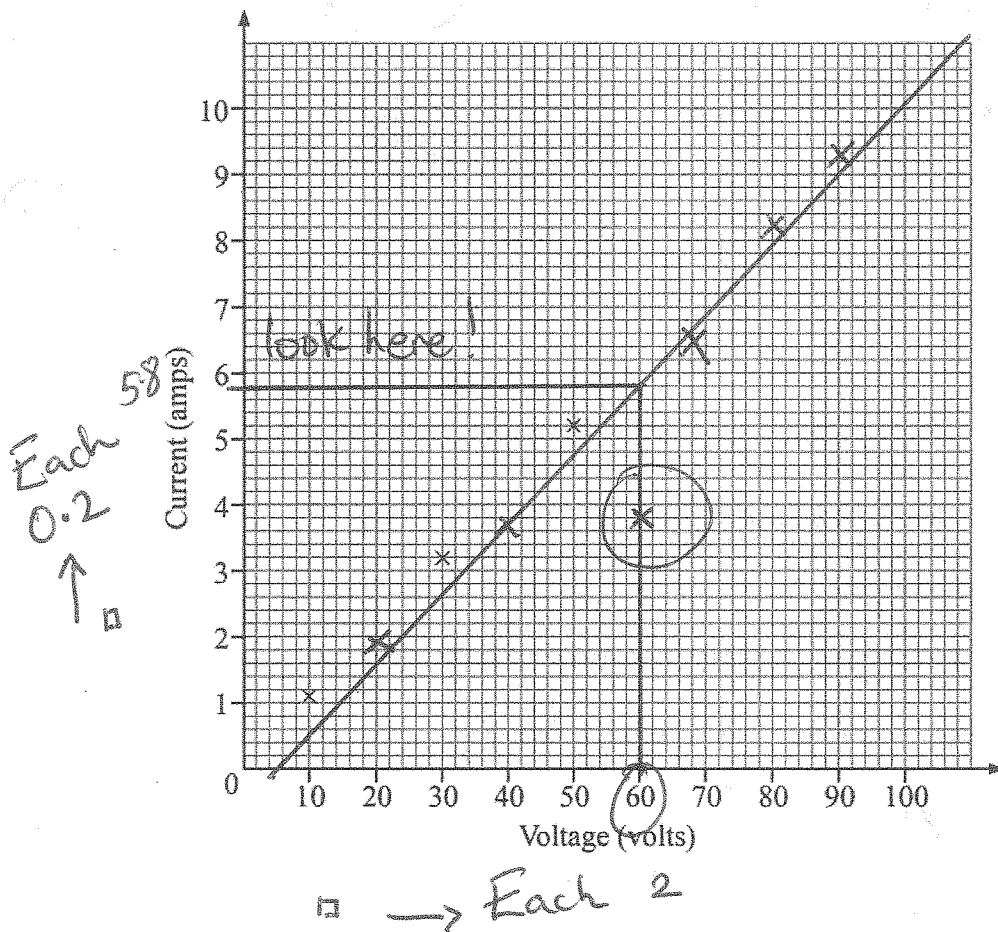


- 1 Nine science students each measured the current (in amps) that flowed through a circuit at various voltages.

Their results are recorded below.

Student	1	2	3	4	5	6	7	8	9
Voltage	10	50	30	20	80	40	60	70	90
Current	1.1	5.2	3.2	1.9	8.2	3.7	3.8	6.5	9.3

- (a) Draw a scatter graph of the points. The first three points have already been plotted.



[2]

- (b) Which student appears to have taken an incorrect reading?

Answer student 7 [1]

- (c) Draw a line of best fit on your scatter graph.

Try to get half the points on each side

- (d) Use the line of best fit to estimate the current for the incorrect reading taken by the student.

Answer current = 5.8 amps [1]

M3 = 11 days to go!

11 (a) Write down the two numbers that are the square roots of 25

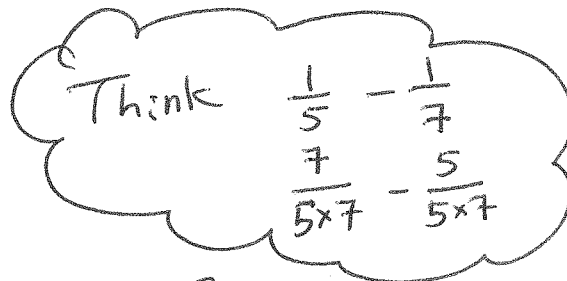
Answer +5 and -5 [1]

(b) Simplify the expression

$$\frac{e}{5} - \frac{e}{7}$$

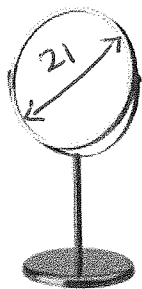
common denominator

$$\frac{7e}{35} - \frac{5e}{35}$$



Answer  $\frac{2e}{35}$  [3]

13 A circular glass shaving mirror has a diameter of 21 cm.



It has glass on both sides.

Calculate the total area of glass correct to the nearest whole number.

Think The Circle Song

$$A = \pi r^2$$

$$A = \pi \times 10.5^2$$

$$A = 346.36$$

Answer \_\_\_\_\_ cm<sup>2</sup> [3]

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But then multiply by 2 to find both sides

$$\text{Area} = 346.36 \times 2$$

$$\text{Area} = 692.72$$

$$\text{Area} = 693 \text{ cm}^2$$