

m7 = 1 day to go!

Sean is making plans to build a shed with a rectangular floor.

The floor has length 4 m and width 3 m.

He thinks the area of the floor is too small.

He wants to have exactly double the floor area.

$$\begin{aligned} \text{Area} &= 4\text{ m} \times 3\text{ m} \\ &= 12\text{ m}^2 \end{aligned}$$

He writes down 3 ideas:

Idea 1 Add 2 m to the length and add 2 m to the width.

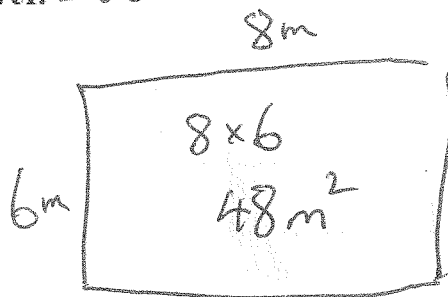
Idea 2 Double the length and double the width.

Idea 3 Double the length only.

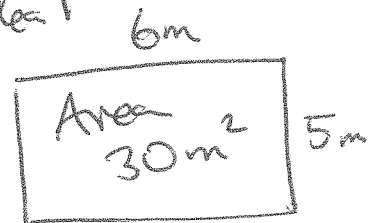
Which idea will work?

Explain your answer.

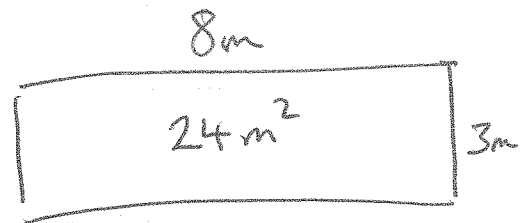
Idea 2



Idea 1



Idea 3



Answer Idea 3 because that gives area 24

Other ideas are Idea 1 gives 30 m²

Idea 2 gives 48 m²

4 The cost, £C, of a taxi journey can be calculated using the formula

$$C = 2.50 + 1.25 \times M$$

£2.50 is the initial charge, M = number of miles.

Julie has £10 and Kate has £20.

Kate says she can travel exactly twice the number of miles that Julie can by taxi.

Is Kate correct?

Explain your answer.

Julie

$$10 = 2.5 + 1.25M$$

$$7.5 = 1.25M$$

$$6 = M$$

6 miles for Julie

Kate

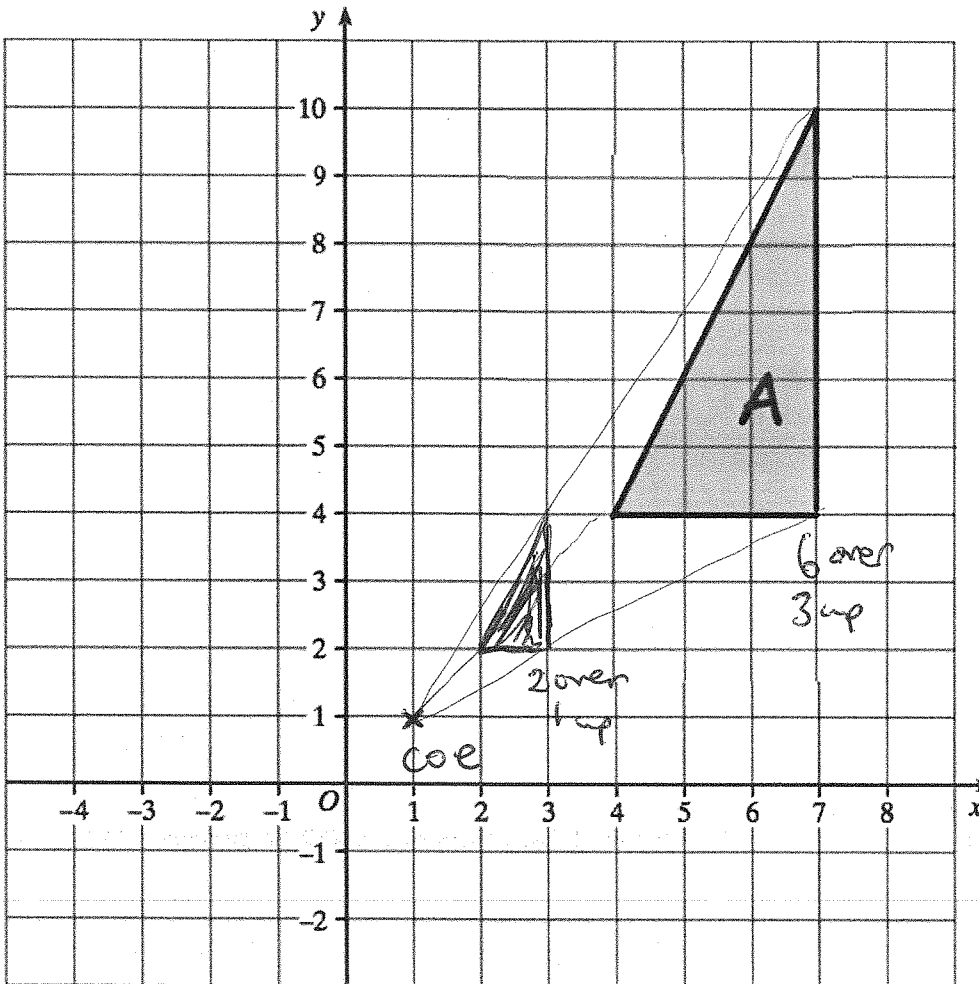
$$20 = 2.5 + 1.25M$$

$$17.5 = 1.25M$$

$$14 = M$$

14 miles for Kate

[3]



Always measure from the centre of enlargement
 $\frac{1}{3}$ of the distances.

Draw the enlargement of shape A with scale factor $\frac{1}{3}$ and centre of enlargement (1,1).

makes it smaller

(3)