

9th February



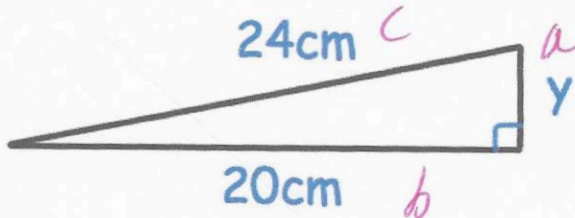
Corbettmaths

Mrs Jenkins buys a car for £3400.
She sells it for £3800.

Work out her percentage profit.

$$\frac{400}{3400} \times 100$$

$$11.76\%$$



Find y .

$$\begin{aligned} a^2 + b^2 &= c^2 \\ y^2 + 20^2 &= 24^2 \\ y^2 + 400 &= 576 \\ y^2 &= 176 \end{aligned}$$

$$y = 13.2665 \text{ cm}$$

Use approximations to estimate the value of

$$\sqrt{\frac{50.77}{0.513}} \approx \sqrt{\frac{50}{0.5}} = \sqrt{100} = 10$$

length, L, cm	Frequency	fx
$0 < L \leq 10$	5×21	105
$10 < L \leq 20$	15×11	165
$20 < L \leq 30$	25×31	775
$30 < L \leq 40$	35×12	420
$40 < L \leq 50$	85×25	1125
	<u>100</u>	<u>2590</u>

Work out the estimated mean

$$2590 \div 100 = 25.9$$

Solve the simultaneous equations

$$4x + 5y = 25 \quad \text{Eq 1}$$

$$x - y = 4 \quad \times 5 \quad \text{Eq 2}$$

$$5x - 5y = 20 \quad \text{Eq 3}$$

Adding Eq 1 and Eq 3

$$9x = 45$$

$$x = 5$$

Sub $x = 5$ into Eq 2

$$y = 1$$

Answer: $x = 5$ and $y = 1$