

2nd September



Corbettmaths

$$a^b = 1$$

Write down three possible pairs of values for a and b.

The values of a must be different in each answer.

The values of b must be different in each answer.

$$\begin{aligned} a &= 5 & b &= 0 \\ a &= 1 & b &= 9 \\ a &= -1 & b &= 4 \end{aligned}$$

Factorise $2w^2 - 9w + 4$

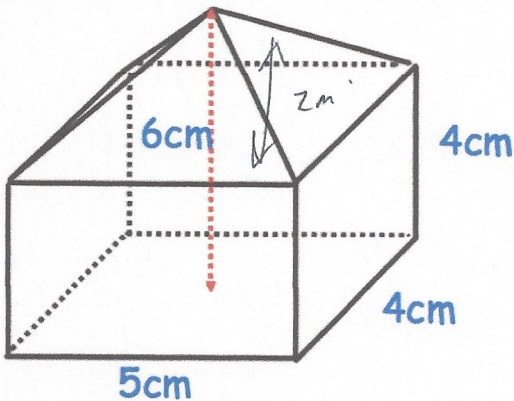
$$(2w - 1)(w - 4)$$

Declan ran a distance of 200m in a time of 26.2 seconds.

The distance of 200m was measured to the nearest 10 metres. ^{205m}
 The time of 26.2 was measured to the nearest tenth of a second. ^{26.15}

Work out the upper bound for Declan's average speed.

$$\begin{aligned} \text{Max } S &= \frac{\text{Max } d}{\text{Min } t} \\ &= \frac{205}{26.15} = 7.839 \text{ m/s} \end{aligned}$$



Shown is a solid made from a pyramid and a cuboid.

Find the volume of the solid.

$$\begin{aligned} \text{Cuboid: } & 5 \times 4 \times 4 = 80 \text{ cm}^3 \\ \text{Pyramid: } & \frac{1}{3} \times (4^2) \times 2 \\ & = \cancel{10.666} \dots 13.\bar{3} \end{aligned}$$

~~10.666...~~

$$93.\bar{3} \text{ cm}^3$$