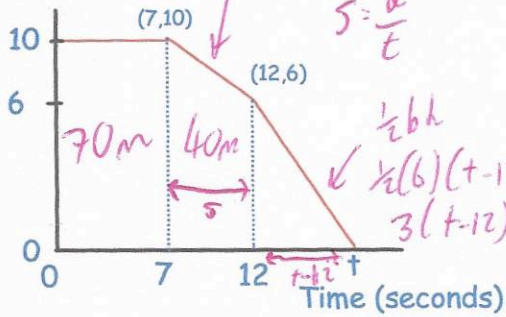


13th January



Corbettmaths

Speed (m/s)



Find t

$$74 + 3t = 5.96t$$

$$74 = 2.96t$$

$$t = 25 \text{ seconds}$$

The average speed from 0 to t seconds was 5.96m/s

$$s = \frac{d}{t} = \frac{70 + 40 + 3(t-12)}{t} = 5.96$$

$$\frac{110 + 3t - 36}{t} = 5.96$$

Find the rate of deceleration from 12 to t seconds.

$$\text{gradient} = \frac{\text{rise}}{\text{run}} = \frac{-6}{13}$$

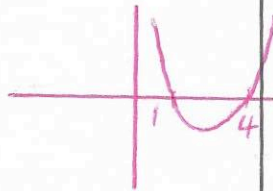
$$\text{deceleration} = \frac{6}{13} \text{ m/s}^2$$

Solve

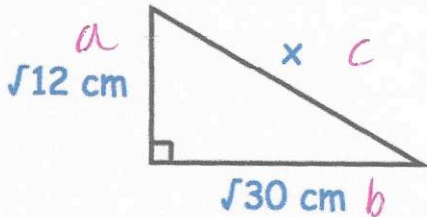
$$x^2 - 5x + 4 > 0$$

$$(x-1)(x-4)$$

$$x = 1 \text{ or } x = 4$$



$$x < 1 \text{ or } x > 4$$



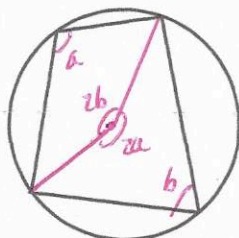
Find x

$$(\sqrt{12})^2 + (\sqrt{30})^2 = x^2$$

$$12 + 30 = x^2$$

$$x^2 = 42$$

$$x = \sqrt{42}$$



Prove the opposite angles in a cyclic quadrilateral add to 180°

$$2a + 2b = 360^\circ \text{ dividing by } 2$$

$$a + b = 180^\circ$$

∴ opposite angles add to 180°