



$$6x + 4y = 7y - x$$

Find the ratio $x : y$

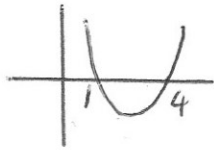
$$7x = 3y$$

$$\boxed{3 : 7}$$

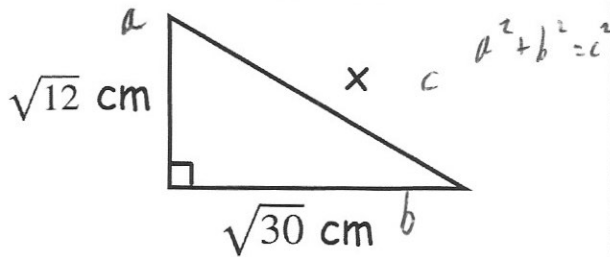
Solve

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

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



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



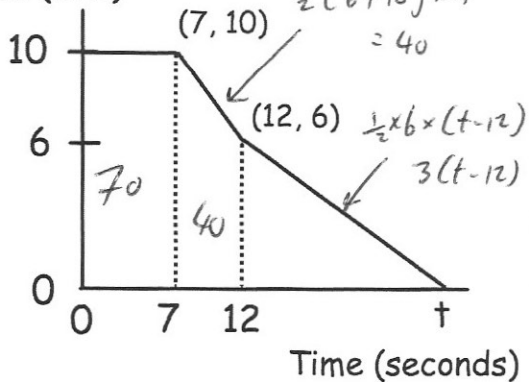
Find x

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

$$12 + 30 = x^2$$

$$x = \sqrt{42} \text{ cm}$$

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 5.96 m/s

$$5 = \frac{d}{t} = \frac{110 + 3t - 36}{t} = 5.96$$

Find the rate of deceleration from 12 to t seconds.

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

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