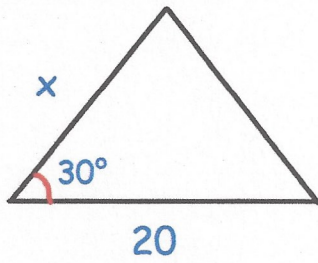


23rd August



Corbettmaths



Find the area of the triangle in terms of x.

$$\frac{1}{2} x \times 20 \times \sin 30$$

$$\frac{1}{2} x \times 20 \times \frac{1}{2} = 5x$$

Given

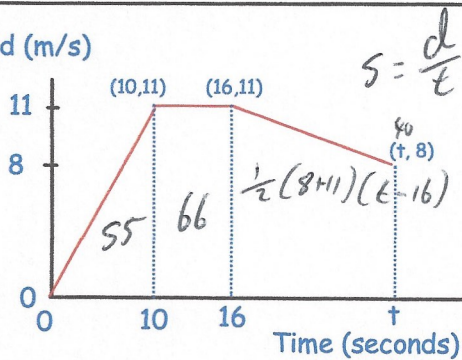
$$y = \frac{5\sqrt{3}}{2}$$

Write an expression for y^3

$$\frac{5\sqrt{3}}{2} \times \frac{5\sqrt{3}}{2} \times \frac{5\sqrt{3}}{2}$$

$$= \frac{125 \times \sqrt{27}}{8} = \frac{375\sqrt{3}}{8}$$

Speed (m/s)



Find t

~~8177777~~

$$t = 40$$

The average speed from 0 to t seconds was 8.725m/s

$$8.75 = \frac{121 + 9.5(t-16)}{t}$$

$$8.75t = 121 + 9.5t - 152$$

$$8.75t = 9.5t - 31$$

$$0.75t = 31$$

Find the deceleration for the final stage of the journey

$$a = \frac{-3}{24} = -\frac{1}{8} = -0.125$$

$$\text{deceleration} = 0.125 \text{ m/s}^2$$

The point $(-5, 1)$ is the turning point of the graph of $y = x^2 + ax + b$

Find a and b

$$y = (x+5)^2 + 1$$

$$y = x^2 + 10x + 25 + 1$$

$$y = x^2 + 10x + 26$$