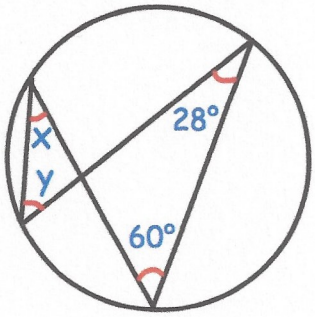
Name: _____ 5-a-day Higher

15th June

Corbettmaths



Find x and y

$x = 28°$

$y = 60°$

Where does the line y = 4x - 8 cross the y-axis?

(0, -8)

or

-8

Where does the line y = 4x - 8 cross the x-axis?

$0 = 4x - 8$

$8 = 4x$

$x = 2$

Show that the line y = 3x + 1 is perpendicular to the line x + 3y + 9 =0

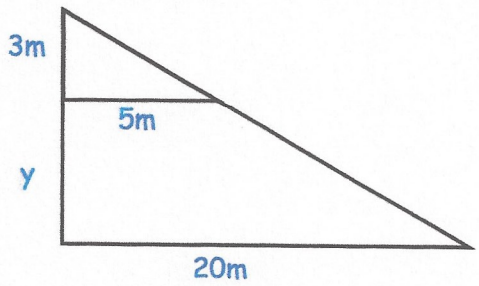
$3y = -x - 9$

$y = -\frac{1}{3}x - 3$

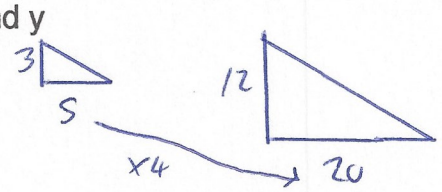
gradients 3 & $-\frac{1}{3}$

$m_1 \times m_2 = -1$ if perpendicular

$3 \times -\frac{1}{3} = -1$ ✓



Find y



$12 - 3 = 9cm$

The speed of a particle is 4.2×10^5 m/s

How far does it travel in a day?

$60 \times 60 \times 24 = 86400$ seconds a day

$86400 \times 4.2 \times 10^5$

Give your answer in kilometres and in standard form.

3.6288×10^{10} metres

3.6288×10^{7} km