13th February **Higher 5-a-day**

Corbettmaths

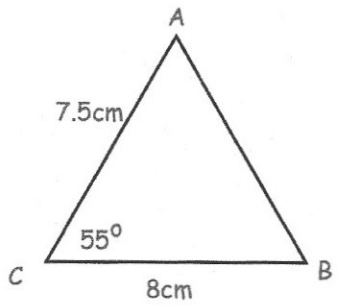
A bag contains red, white, green and pink sweets.
The ratio of red sweets to pink sweets is 3:4.
The ratio of white to green sweets is 2:9
The ratio of green to red sweets is 1:2

53

Work out the smallest possible number of sweets in the bag.

R	W	G	P
3			4
	2	9	
1		1	
6	2/3	3	8

R	W	G	P
18	2	9	24



Calculate the length of AB.

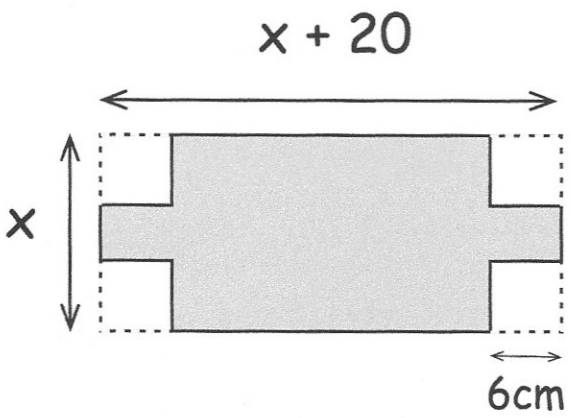
$AB^2 = 7.5^2 + 8^2 - 2 \times 7.5 \times 8 \times \cos 55$

$AB^2 = 51.42...$

$AB = 7.17$ cm

A shape is made by removing four squares from a rectangle that is x + 20 centimetres long and x centimetres wide.

Each square has a side length of 6cm



$x(x+20) - 4 \times 36$

$x^2 + 20x - 144$

$x^2 + 20x - 144 = 1356$

$x^2 + 20x - 1500 = 0$

Find an expression for the area of the shaded shape.

$x^2 + 20x - 144$

Given the area of the shaded shape is 1356cm²

Show that $x^2 + 20x - 1500 = 0$

$x^2 + 20x - 144 = 1356$

$x^2 + 20x - 1500 = 0$

Find the value of x

$(x - 30)(x + 50) = 0$

$x = 30$ cm