

Work out 5^{-3}

$$\frac{1}{5^3} = \frac{1}{125}$$

Work out $36^{\frac{1}{2}}$

$$\sqrt{36} = 6$$

Solve

$$\frac{4x-3}{2} + \frac{2x+1}{4} + \frac{6x+3}{6} = 1$$

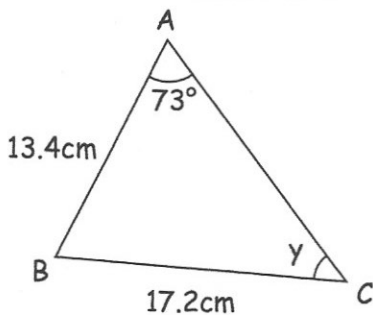
$$\frac{6(4x-3) + 3(2x+1) + 2(6x+3)}{12} = 1$$

$$24x - 18 + 6x + 3 + 12x + 6 = 12$$

$$42x - 9 = 12$$

$$42x = 21$$

$$x = \frac{1}{2}$$

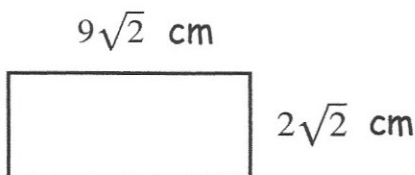
Calculate the size of y

$$\frac{\sin y}{13.4} = \frac{\sin 73}{17.2}$$

$$\sin y = 0.745\dots$$

$$y = 48.16^\circ$$

Find the area of the rectangle



$$9\sqrt{2} \times 2\sqrt{2}$$

$$18\sqrt{4}$$

$$18 \times 2 = 36 \text{ cm}^2$$

Rhys has a large tub of yellow counters. Alex has a large tub of blue counters. 40 yellow counters are taken from Rhys' tub and placed into Alex's tub. 40 blue counters are taken from Alex's tub and placed into Rhys' tub. Rhys randomly selects 100 counters from his tub. 8 of the 100 counters are blue. Alex randomly selects 50 counters from his tub. 48 of the 50 counters are blue.

All the counters are gathered together. Work out an estimate for the ratio of yellow to blue counters in the tub.

Rhys 8% blue (40 blue counters)
 $40 \div 0.08 = 500$ counters 40 blue
460 yellow

Alex 4% yellow (40 yellow)
 $40 \div 0.04 = 1000$ counters 40 yellow
960 blue

$$500 : 1000$$

$$1 : 2$$