

January 17th

5-a-day

Numeracy

The church is **North** of the town

The town is South of the church

The airport is **North East** of the city.

The city is South West of the airport

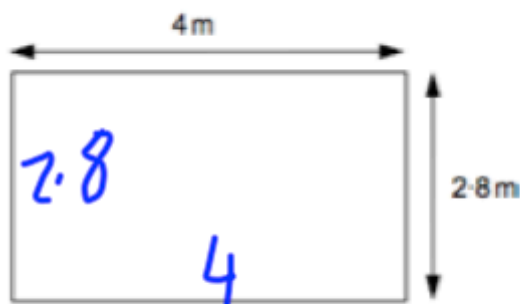
	Southampton
Oxford	69
Manchester	226
Cambridge	130
Norwich	201

$$\begin{array}{r} 226 \\ 69 \\ \hline 295 \end{array}$$

Sally drives from Manchester to Southampton and then from Southampton to Oxford.

How many miles does she drive?

$$295$$



What is the perimeter of the rectangle?

$$4 + 4 + 2.8 + 2.8 = 13.6$$



$$75 \div 5 = 15 \quad 15 \times 8 = 120$$

Convert 75 miles into kilometres

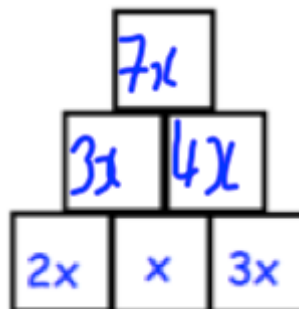
$$120 \text{ km}$$

Convert 40 kilometres into miles

$$40 \div 8 = 5$$

$$5 \times 5 = 25 \text{ miles}$$

The contents of each box can be found by adding the two boxes directly beneath it.



A bottle of water was  $\frac{2}{3}$  full.  
Beth drinks  $\frac{4}{5}$  of its contents.

What is the fraction of the bottle is now full?

$$\frac{2}{3} \text{ of } \frac{4}{5}$$

$$\frac{2}{3} \times \frac{4}{5} = \frac{8}{15}$$

$$W^7 \times W^4$$

$$W^{11}$$

$$W^7 \div W^4$$

$$W^3$$

x	$x^2 + x$	Comment
7	56	low
8	72	high
7.5	63.75	high
7.9	62.16	high
7.3	60.59	low
7.35	61.3725	low

$$\begin{array}{ccc} 7.3 & 7.35 & 7.4 \\ \hline & \times & \\ \downarrow & \downarrow & \uparrow \end{array}$$

Solve  $x^2 + x = 62$

$$7.4$$

The ratio of boys to girls in a school is 4:5.

There are 80 boys in the school.

How many students attend the school?

$$80 \div 4 = 20$$

$$20 \times 5 = 100 \text{ girls}$$

$$180$$

Solve

$$5(x - 1) = 4(x + 2) + 2(x - 7)$$

$$5x - 5 = 4x + 8 + 2x - 14$$

$$5x - 5 = 6x - 6$$

$$-5 = x - 6$$

$$x = 1$$

Calculate an estimate of the mean.

Time ( $t$ minutes)	Frequency
$0 < t \leq 10$	20
$10 < t \leq 20$	17
$20 < t \leq 30$	12

49

100  
255  
300  
655

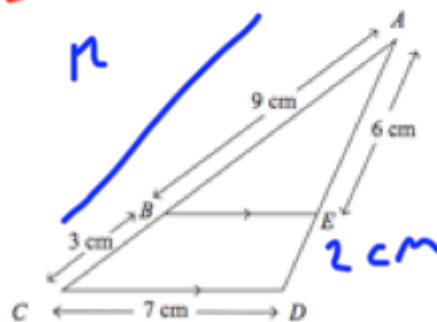
$$655 \div 49$$

$$13.37$$

Find ED

$$9 \times \frac{4}{3} = 12$$

$$6 \times \frac{4}{3} = 8$$



Solve

$$\frac{x-3}{5} = x-5$$

$$x-3 = 5x-25$$

$$-3 = 4x-25$$

$$22 = 4x$$

$$x = 5.5$$

$$8x - 4 + 3x + 9 = (x+3)(2x-1)$$

$$11x + 5 = 2x^2 + 5x - 3$$

$$0 = 2x^2 - 6x - 8$$

$$0 = x^2 - 3x - 4$$

$$(x-4)(x+1) = 0$$

$$x = 4 \text{ or } x = -1$$

Solve

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

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