

January 20th

5-a-day

Numeracy

Work out $384 - 193$

$$\begin{array}{r} 384 \\ -193 \\ \hline 191 \end{array}$$

191

List the first 5 prime numbers

2 3 5 7 11

List the first 5 square numbers

1 4 9 16 25

Draw a trapezium



Draw a parallelogram



Max thinks of a number.

He squares it.
Then he adds 4.

His answer is 53.

What was the number he thought of?

$$53 - 4 = 49$$

$$\sqrt{49} = 7$$



Find y

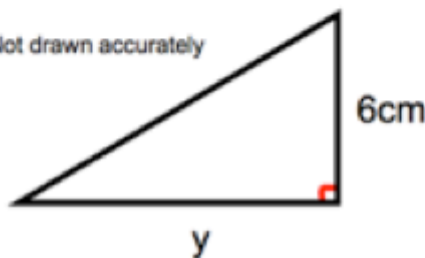
110°

Simplify $3a + 2w - 5a - 9w$

$$-2a - 7w$$

The area of the triangle is 21cm^2

Not drawn accurately



Find y

$$\begin{aligned} \frac{1}{2}y \times 6 &= 21 \\ y \times 6 &= 42 \\ y &= 7\text{cm} \end{aligned}$$

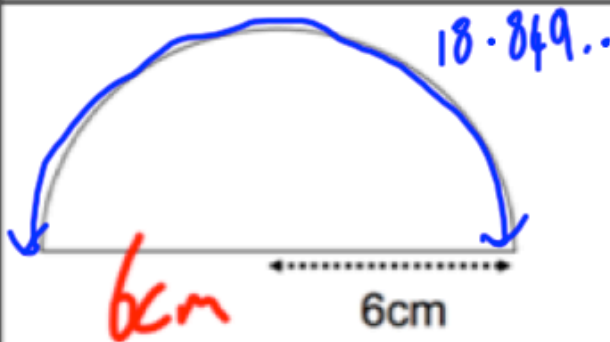
Breed	Frequency
Spaniel	11
Poodle	7
Greyhound	4
Jack Russell	14

$$\begin{aligned} & \times 10 & 110^\circ \\ & \times 10 & 70^\circ \\ & \times 10 & 40^\circ \\ & \times 10 & 140^\circ \\ & 36 & \end{aligned}$$

James is drawing a pie chart.

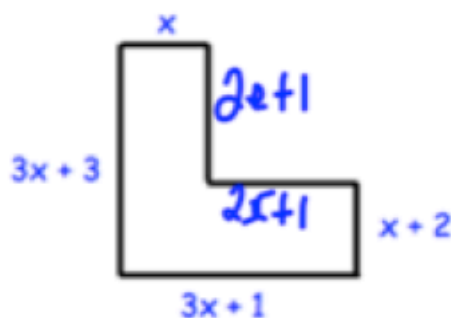
Work out the size of each angle.

$$360 \div 36 = 10^\circ$$



Find the perimeter

$$\begin{aligned} \pi \times 12 &= 37.699\dots \\ 37.699\dots \div 2 &= 18.849\dots \\ 18.849\dots + 12 &= \underline{\underline{30.849\dots}} \end{aligned}$$



Find an expression for the perimeter.

$$12x + 8$$

January 20	5-a-day	Higher
<p>Find the circumference of a circle with radius 4cm.</p> $\pi \times 8 =$ $25.13 \dots \text{cm}$	<p>Find the radius of a circle with circumference 2m.</p> $200 \div \pi = 63.66 \dots$ $63.66 \dots \div 2 = 31.83 \text{cm}$	
<p>Line 1 has equation $y = 5x + 2$</p> <p>Write down the equation of a line parallel to Line 1.</p> $y = 5x + 10 \text{ etc}$	<p>Line 2 has equation $y = 2x - 1$</p> <p>Write down the equation of a line perpendicular to Line 2.</p> $y = -\frac{1}{2}x + 5 \text{ etc}$	
<p>A large bottle of cola is 18cm tall. A small bottle is 12cm tall.</p> <p>David claims the small bottle contains two-thirds the amount of water than the large bottle.</p>	<p>Show he is wrong.</p> $100 \times 1.5^3 = 337.5$ <p>over 3 times more.</p>	
<p>Write down the Sine rule.</p> $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$	$\frac{-1 \pm \sqrt{1 - 64}}{4}$ $\frac{-1 \pm \sqrt{65}}{4}$	
<p>Solve using the quadratic formula</p> $2x^2 + x - 8 = 0$ $a=2 \quad b=1 \quad c=-8$	$\frac{-1 + \sqrt{65}}{4}$ $\frac{-1 - \sqrt{65}}{4}$ $x = 1.766 \text{ or } x = -2.266$	