

Area: 4cm²Perimeter: 10cm

A journey began at 07:20.

It lasted 32 minutes.

What time did it finish?

07:52

Another journey began at 08:30.

It lasted 49 minutes.

What time did it finish?

09:1914:20

$$135 \div 5 = 27$$

$$36 \times 4 = 144$$

In a quadrilateral, 3 angles are 50, 75 and 100 degrees.

What size is the fourth?

135°

$$50 + 75 + 100 = 225$$

$$360 - 225 = 135$$

The ratio of good apples to bad apples in a basket is 5:2.

An apple is picked at random.

What is the probability of a good apple?

$$5 + 2 = 7$$

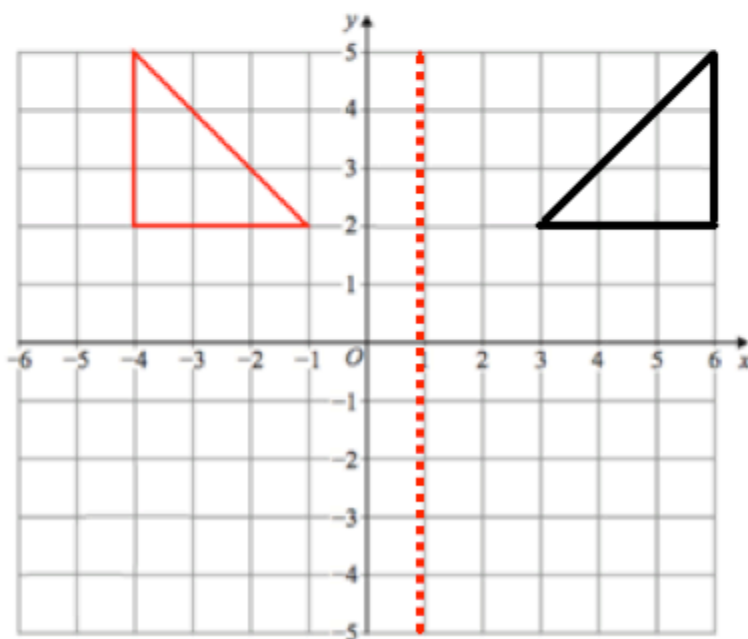
$$\frac{5}{7}$$

Sarah cycles 5 miles in 15 minutes.

Work out her average speed.

$$\begin{array}{l} \times 4 \downarrow \\ 20 \\ \times 4 \downarrow \\ 60 \text{ minutes} \end{array}$$

$$20 \text{ mph.}$$



Reflect the triangle in the mirror line $x = 1$.

Kayleigh says "if you cube a number it will always give you a larger number."

Show she is incorrect with two counter-examples.

$$\begin{array}{l} 1^3 = 1 \\ 0^3 = 0 \\ 0.5^3 = 0.125 \end{array} \quad \text{etc.}$$

February 9	5-a-day	Higher
<p>Solve $x^4 + 2x = 30$ to 1 decimal place.</p> <p style="text-align: center;">2.2</p>	<p>$x^4 + 2x$</p> <p>2 20</p> <p>3 87</p> <p>2.1 23.6481</p> <p>2.2 27.8256</p> <p>2.3 32.5841</p> <p>2.25 30.1289</p> <p style="text-align: center;"> $\begin{array}{ccc} \downarrow & \uparrow & \uparrow \\ 2.2 & \times & 2.3 \end{array}$ </p>	<p>constant</p> <p>low.</p> <p>high.</p> <p>low</p> <p>low</p> <p>high</p> <p>high</p>
<p>Work out 1.9×0.12</p> <p style="text-align: center;">0.228</p>		
<p>Solve $x^2 + 2x - 60 = 0$ to 1 decimal place.</p> <p>$a = 1$ $b = 2$ $c = -60$</p> <p style="text-align: center;">$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$</p>	<p style="text-align: center;">$\frac{-2 \pm \sqrt{4 + 240}}{2}$</p> <p style="text-align: center;">$= \frac{-2 \pm \sqrt{244}}{2}$</p>	
<p>What is the single multiplier equivalent to a 8% decrease?</p> <p style="text-align: center;">0.92</p>	<p style="text-align: center;">$= \frac{-2 + \sqrt{244}}{2}$ or $\frac{-2 - \sqrt{244}}{2}$</p> <p style="text-align: center;">$x = 6.8$ or $x = -8.8$</p>	
<p>A water tank springs a leak (at the base) and loses 8% of its water every minute.</p> <p>What percentage of water is lost over 5 minutes?</p>	<p style="text-align: center;">100×0.92</p> <p style="text-align: center;">$= 65.90815232\%$</p> <p style="text-align: center;">$100 - 65.90815232\%$</p> <p style="text-align: center;">$= 34.09\%$</p>	