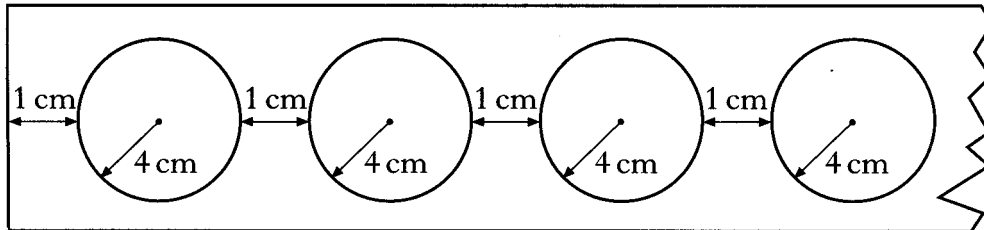
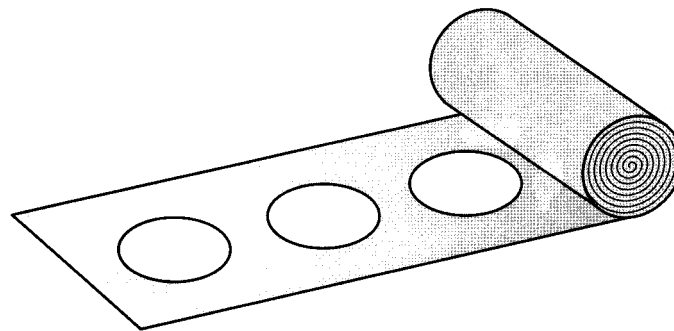


Circular tops for yoghurt cartons are cut from a strip of metal foil as shown below.



The radius of each top is 4 centimetres.

The gap between each top is 1 centimetre.

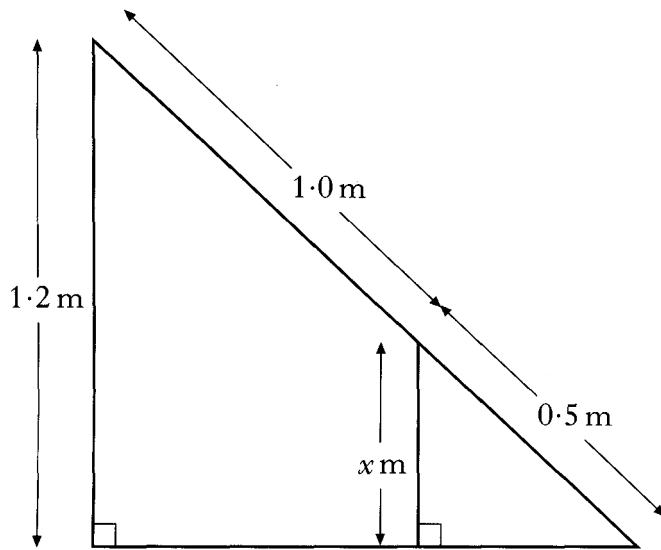


How many tops can be cut from a strip of foil 7 metres long?

Ans 77 tops

2008 P2 Q11

The diagram below shows the design for a house window.



2007 P2 Q11

Find the value of x .

3

Ans 0.4 m

The table below can be used to convert tyre pressures from pounds per square inch (lb/sq in) to kilograms per square centimetre (kg/sq cm).

lb/sq in	20	22	24	26	28	30	32	34
kg/sq cm	1.41	1.55	1.69	1.83	1.97	2.11	2.25	2.39

Convert **29 lb/sq in** to **kg/sq cm**.

2

Ans 2.04 kg/sq cm

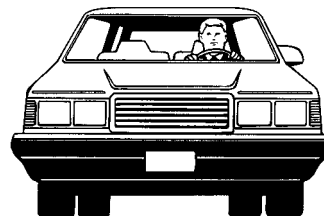
Serge drives from his home in Paris to Madrid, a journey of 1280 kilometres.

His car has a 60 litre petrol tank and travels 13 kilometres per litre.

Serge starts his journey with a full tank of petrol.

What is the least number of times he has to stop to refuel?

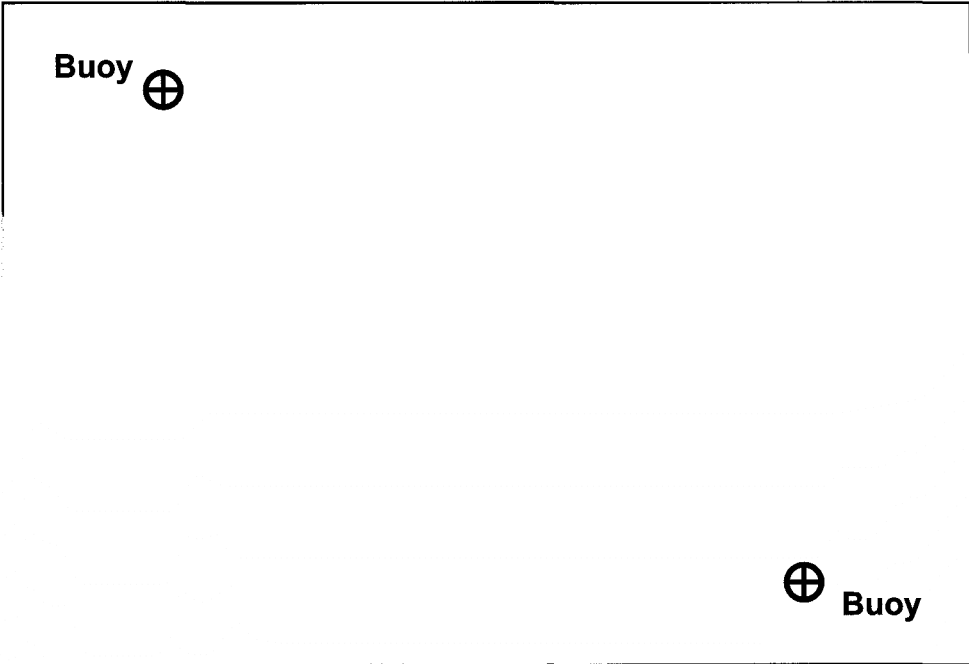
Give a reason for your answer.




2005 P2 Q9

3

Ans Once

2004 P1 Q2	<p>Express $\frac{3}{7}$ as a decimal.</p> <p>Give your answer correct to two decimal places.</p>	2	
Ans	0.43		
2004 P2 Q13	<p>The diagram below shows the position of two buoys.</p> <p>Sofie has to sail her yacht between the two buoys so that it is always the same distance from each buoy.</p> <p>Show the yacht's course on the diagram.</p> <div style="border: 1px solid black; padding: 20px; margin: 10px 0;">  </div>	2	
Ans			

2003 P2 Q6	<p style="text-align: center;">START</p> <div style="text-align: center;"> </div> <p style="text-align: center;">FINISH</p> <p>Following the arrows, use the instructions below. Find the path which</p> <ul style="list-style-type: none"> • starts with a multiple of 4, • moves to a prime number, • finishes with a square number. <p>Write your numbers in the boxes below.</p> <p>First number Second number Third number</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 40px; height: 30px; margin: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px; margin: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px; margin: 5px;"></div> </div>	3
Ans	24, 43, 36	
2002 P1 Q6	<p>Starting with the smallest, write the following in order.</p> <p style="text-align: center;">0.404 $\frac{1}{4}$ 41% 0.04 $\frac{4}{10}$</p>	2
Ans	0.04, $\frac{1}{4}$, $\frac{4}{10}$, 0.404, 41%	

2002 P1 Q9	<p>A gardener has been measuring the weekly growth rates of plants.</p> <p>Two of the plants that have been measured are Plant A and Plant B.</p> <p>One week Plant A is 29 cm high and Plant B is 46 cm high.</p> <p>The next week Plant A is 57 cm high and Plant B is 71 cm high.</p> <p>Which plant has grown more in the week and by how much?</p>	 <p style="text-align: center;">Plant A Plant B</p>		3
Ans	Plant A, by 3cm			
2000 P1 Q7	<p>The operation \blacklozenge means “square the first number and multiply by the second”.</p>	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <p>For example, $5 \blacklozenge 3 = 5^2 \times 3 = 25 \times 3 = 75$</p> </div>		2
Ans	(a) 144 (b) $a = 7$			