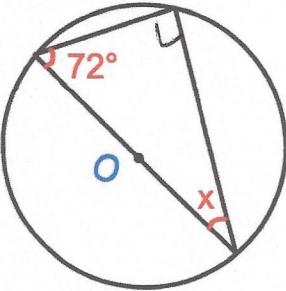


<p>27th May</p> 	<p>Find x</p> <p style="text-align: right;">Corbettmaths</p> <p style="text-align: center; font-size: 2em;"><math>18^\circ</math></p>								
<p>① Derek drives to a football match He drives the first 10 miles in 20 minutes. ② He then drives at 55mph for 30 minutes.</p> <p>The information below was found in his car manual</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Average Speed</th> <th style="text-align: left;">Miles per gallon</th> </tr> </thead> <tbody> <tr> <td>Less than 50 mph</td> <td>55</td> </tr> <tr> <td>50 to 60 miles per hour</td> <td>50</td> </tr> <tr> <td>More than 60 mph</td> <td>45</td> </tr> </tbody> </table> <p>① 30mph      1 gallon = 55 miles  <math>\frac{1}{55}</math> gallons = 1 mile  <math>\frac{10}{55}</math> gallons = 10 miles</p>	Average Speed	Miles per gallon	Less than 50 mph	55	50 to 60 miles per hour	50	More than 60 mph	45	<p>Work out how much petrol he used in total</p> <p>②</p> <p>1 gallon = 50 miles  <math>\frac{1}{50}</math> gallon = 1 mile  <math>\frac{27.5}{50} = 27.5 \text{ miles}</math></p> <p style="text-align: right; font-size: 1.5em;">0.7318 gallons</p> <hr/> <p>He completed the return journey at 70mph. How much petrol did he used in the return journey?</p> <p>45 miles = 1 gallon          1 miles = <math>\frac{1}{45}</math> gallon  <math>37.5 \text{ mls} = \frac{37.5}{45}</math></p> <p style="text-align: right; font-size: 1.5em;">0.83 gallons</p>
Average Speed	Miles per gallon								
Less than 50 mph	55								
50 to 60 miles per hour	50								
More than 60 mph	45								
<p>Convert <math>2.4\text{m}^2</math> into <math>\text{mm}^2</math></p> <p>Give your answer in standard form.</p>	<p style="text-align: center; font-size: 1.5em;"><math>2400000 \text{ mm}^2</math></p>								
<p>A and B are positive numbers. A is inversely proportional to B. When <math>A = 4</math>, <math>B = 100</math>.</p> <p>Find the value of A when <math>B = A</math>.</p> <p><math>A \propto \frac{1}{B}</math>    <math>A = \frac{k}{B}</math>    <math>4 = \frac{k}{100}</math>  <math>k = 400</math></p>	<p><math>A = \frac{400}{B}</math>      <math>x = \frac{400}{x}</math>  <math>x^2 = 400</math>  <math>x = 20</math></p>								