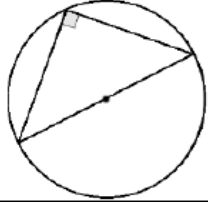
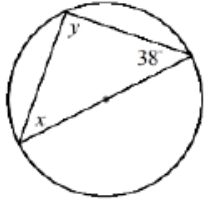
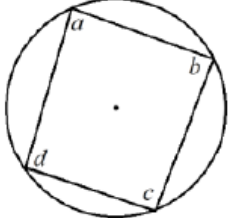
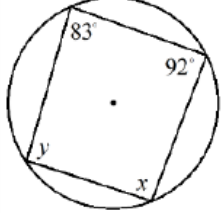
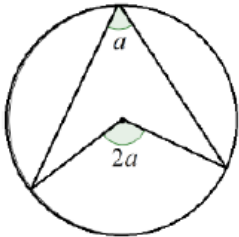
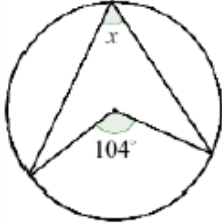
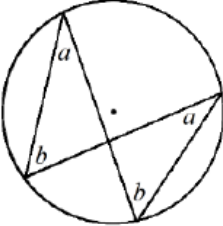
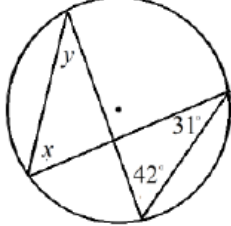
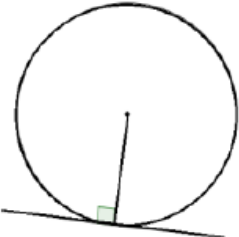
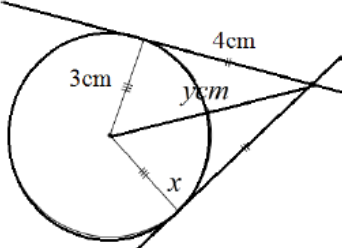
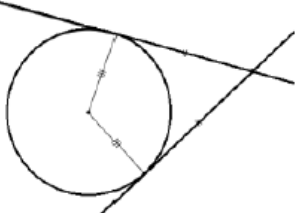
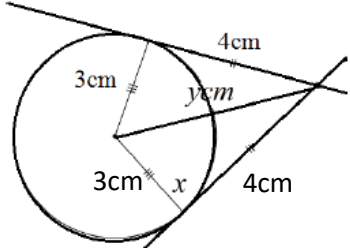
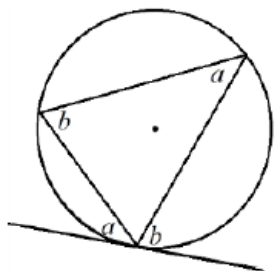
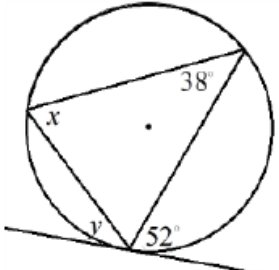
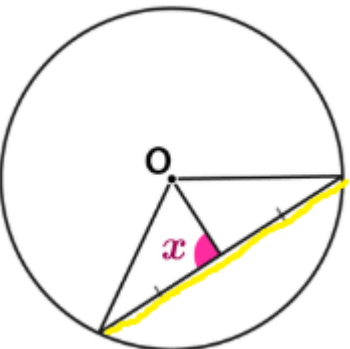
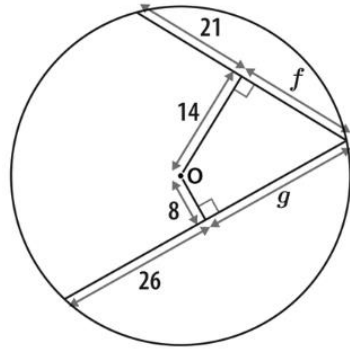


## Topic: Circle Theorems

Topic/Skill	Definition/Tips	Example
Circle Theorem 1	<p>Angle in a semicircle is <math>90^\circ</math></p> 	 $y = 90^\circ$ $x = 180 - 90 - 38 = 52^\circ$
Circle Theorem 2	<p>Opposite angles in a cyclic quadrilateral sum to <math>180^\circ</math>.</p>  $a + c = 180^\circ$ $b + d = 180^\circ$	 $x = 180 - 83 = 97^\circ$ $y = 180 - 92 = 88^\circ$
Circle Theorem 3	<p>The angle at the centre is twice the angle at the circumference.</p> 	 $x = 104 \div 2 = 52^\circ$
Circle Theorem 4	<p>Angles in the same segment are equal.</p> 	 $x = 42^\circ$ $y = 31^\circ$
Circle Theorem 5	<p>Tangent is perpendicular to the radius</p> 	 $x = 90^\circ$

<p>Circle Theorem 6</p>	<p>Two tangents that meet at a point are equal in length.</p> 	 <p><math>y = 5\text{cm}</math> (Pythagoras' Theorem)</p>
<p>Circle Theorem 7</p>	<p>Alternate Segment Theorem</p> 	 <p><math>x = 52^\circ</math> <math>y = 38^\circ</math></p>
<p>Circle Theorem 8</p>	<p>A radius bisects a <b>chord</b> at <math>90^\circ</math></p>  <p>(bisects means to cut in half)</p>	 <p><math>f = 21\text{cm}</math> <math>g = 26\text{cm}</math></p>

**Remember:**

When working on Circle Theorem problems, you should label the diagrams with each angle, length or other piece of information that you are given or that you work out.

You should also get into the habit of giving your reasons (angle facts or circle theorem statements) after each section of workings.