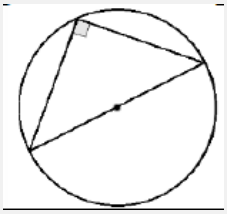
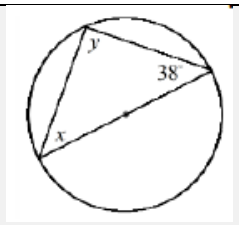
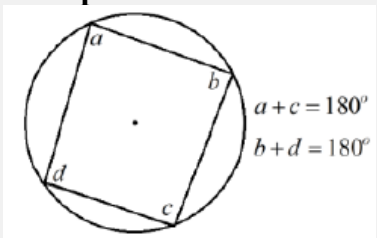
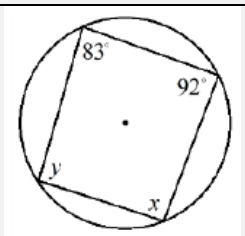
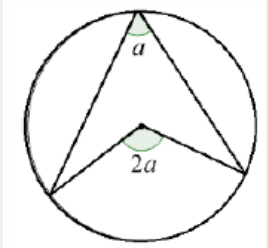
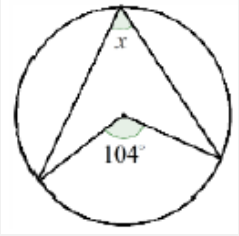
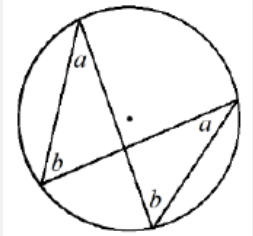
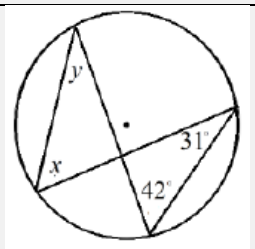
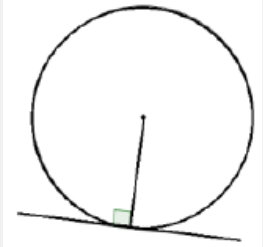
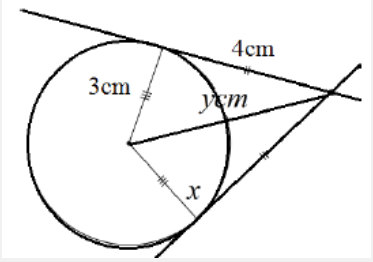
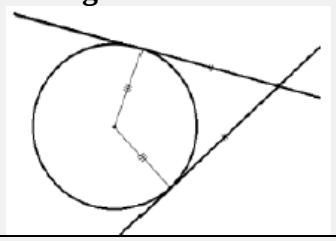
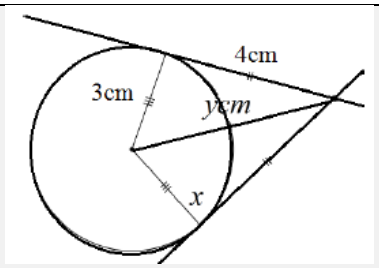
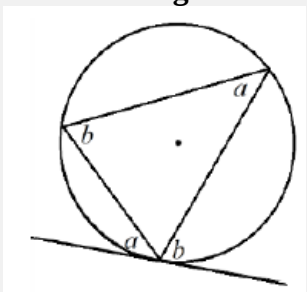
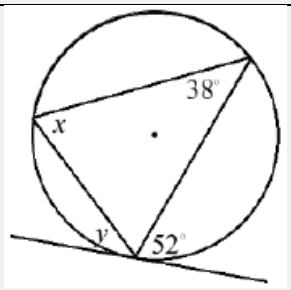
Topic: Circle Theorems

Topic/Skill	Definition/Tips	Example
Circle Theorem 1	**Angles in a semi-circle have a right angle at the circumference.** 	 $y = 90°$ $x = 180 - 90 - 38 = 52°$
Circle Theorem 2	**Opposite angles in a cyclic quadrilateral add up to 180°.** 	 $x = 180 - 83 = 97°$ $y = 180 - 92 = 88°$
Circle Theorem 3	**The angle at the centre is twice the angle at the circumference.** 	 $x = 104 \div 2 = 52°$
Circle Theorem 4	**Angles in the same segment are equal.** 	 $x = 42°$ $y = 31°$
Circle Theorem 5	**A tangent is perpendicular to the radius at the point of contact.** 	 $y = 5cm$ (Pythagoras' Theorem)

Circle Theorem 6	**Tangents from an external point at equal in length.** 	 $x = 90°$
Circle Theorem 7	**Alternate Segment Theorem** 	 $x = 52°$ $y = 38°$