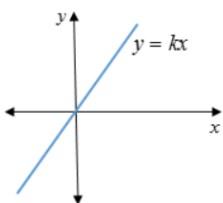
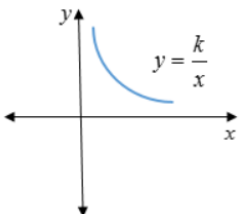
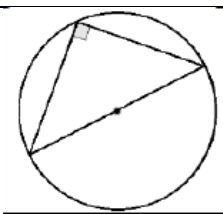
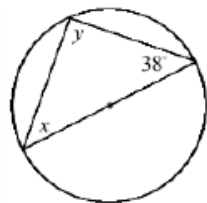
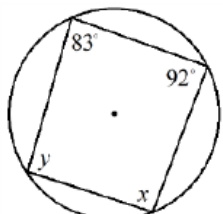
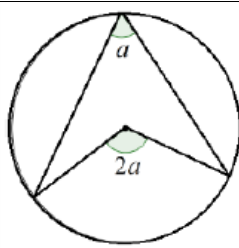
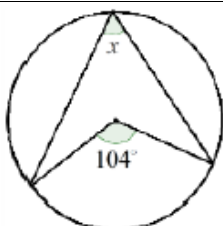
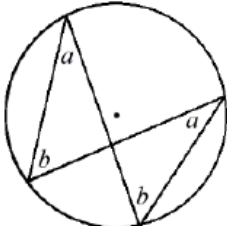
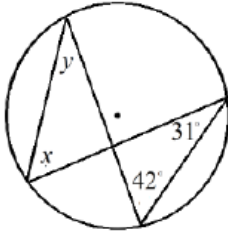
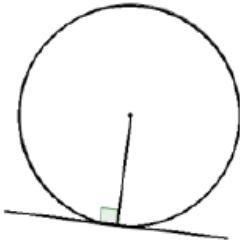
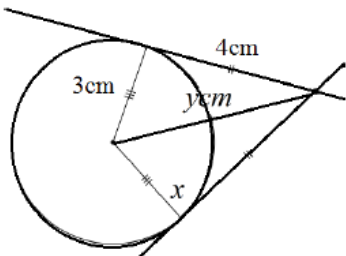
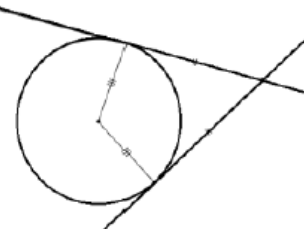
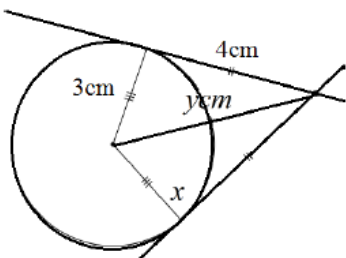
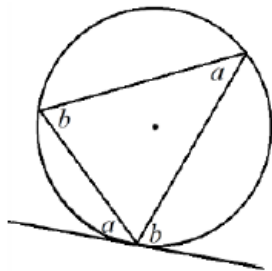
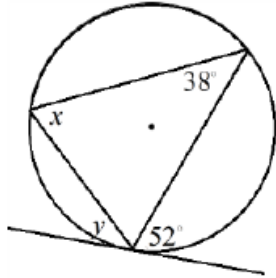


Year 11 – Module 7 Higher

Topic/Skill	Definition/Tips	Example
Direct proportion	As one thing increases, the other thing increases. e.g. As speed increases, the distance increases for the same amount of time $y \propto x$	The graph is always a straight line 
Inverse proportion	As one thing increases, the other thing decreases. e.g. if it takes 3 men, 8 days to build a wall, how long will it take 6 men to build a similar wall. $y \propto \frac{1}{x}$	The graph is a curve 
Arc of a circle	A part of the circumference	Arc length = $\frac{\text{Circumference}}{360} \times \text{angle}$
Area of sector	A part of the area of the circle	Sector = $\frac{\text{Area of circle}}{360} \times \text{angle}$
Angles in a semi-circle have a right angle at the circumference.		 $y = 90^\circ$ $x = 180 - 90 - 38 = 52^\circ$
Opposite angles in a cyclic quadrilateral, add up to 180° .	Cyclic quadrilaterals is a quadrilateral formed by connecting 4 points on the circumference to each other.	 $x = 180 - 83 = 97^\circ$ $y = 180 - 92 = 88^\circ$
The angle at the centre is twice the angle at the circumference.		 $x = 104 \div 2 = 52^\circ$

Year 11 - Module 7 Higher

Same segment theorem	<p>Angles in the same segment are equal. Points must be connected to the circumference</p> 	 <p>$x = 42^\circ$ $y = 31^\circ$</p>
A tangent meets a radius at a right angle		 <p>$y = 5\text{cm}$ (Pythagoras' Theorem)</p>
Tangents from an external point are equal in length.		 <p>$x = 90^\circ$</p>
Alternate Segment Theorem		 <p>$x = 52^\circ$ $y = 38^\circ$</p>
Equation of a circle	<p>$y^2 + x^2 = r^2$ Where r is the radius of the circle and the centre is at $(0,0)$</p>	