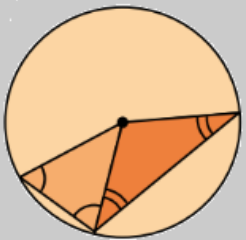
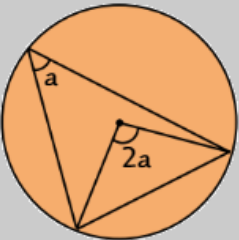
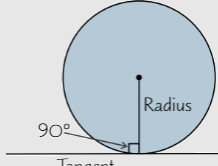
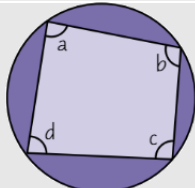
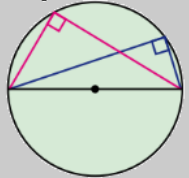
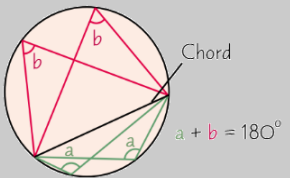
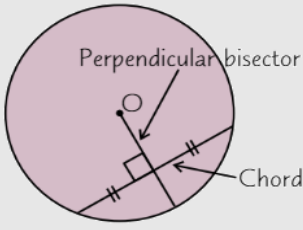
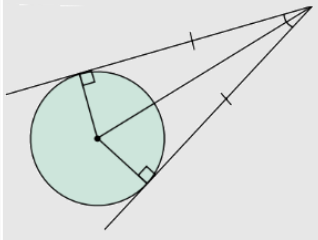
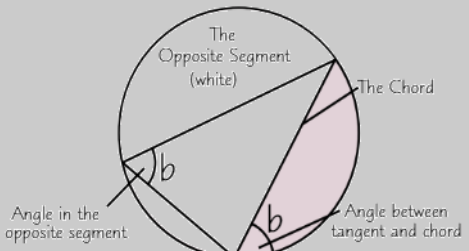
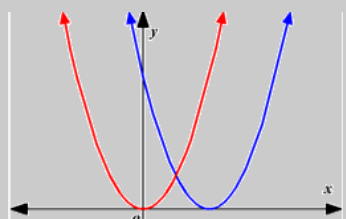
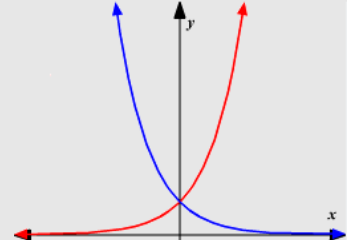


Year 11 Unit 1: Number and Algebra

CIRCLE THEOREMS

<p>A triangle formed by two radii is isosceles</p>		<p>The angle subtended at the centre of a circle is double the angle subtended at the circumference by the same arc</p>	
<p>A tangent to a circle makes a right angle with the radius at that point</p>		<p>Opposite angles in a cyclic quadrilateral sum to 180°</p>	
<p>The angle in a semicircle is a right angle</p>		<p>Angles subtended by an arc in the same segment are equal</p>	
<p>A diameter bisects a chord at right angles</p>		<p>Two tangents to a circle drawn from a single point outside the circle are the same length</p>	
<p>The angle between a tangent and a chord is equal to the angle subtended from the ends of the chord in the alternate segment (alternate segment theorem)</p>			

FUNCTION TRANSFORMATIONS

<p>Translation</p>	<p>Sliding the graph left/right, $F(x + a)$, or up/down, $F(x) + a$.</p>	
<p>Reflection</p>	<p>Inverting all the x-coordinate values, $f(-x)$, or y-coordinate values, $-f(x)$</p>	

Year 11 Unit 1: Number and Algebra

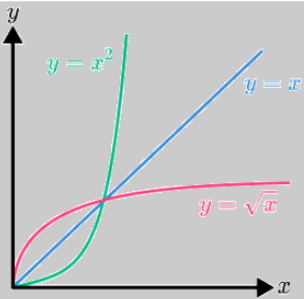
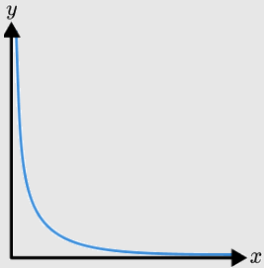
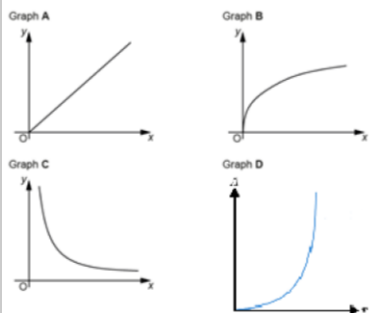
ITERATION

Verifying solutions	By considering at bounds , substituting into the equation and looking for a change of sign , we can check the solution.
Recursive iteration	Finding an estimate for a solution by repeatedly putting the previous answer into the formulae until it no longer changes.
Quadratic nth term	A sequence that involves square numbers . The nth term rule takes the general form $an^2 + bn + c$ where $a + b + c = \text{first term}$

PROOF

Algebraic proof	Using algebra to prove that a statement is true in all cases.
Geometric proof	Using known geometrical facts to prove congruency between two shapes
Circle theorem proof	Using known facts to prove that the definitions of the circle theorems.
Vector proof (Y10 Unit 7)	Using vector geometry to prove that two points lie on the same line /two lines are the same.

TYPES OF GRAPH

Direct proportion – a graph that goes through (0,0)	
Inverse proportion- as one variable increase the other decreases	
Conversion graphs	A graph to convert between two units such as money or mass.
Exponential graphs	A graph whose 'x' value is an index . Takes the form $y = ab^x$ and will always pass through (0,a)
Types of graph – being able to identify the type of graph based on its shape from:	 <p> $y = mx + c$ $y = ax^2 + c$ $y = x^3 + c$ $y = \frac{1}{x}$ $y = \sqrt{x}$ </p>