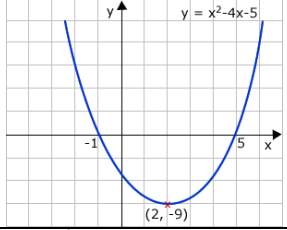
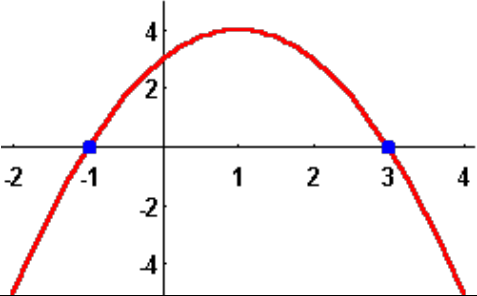

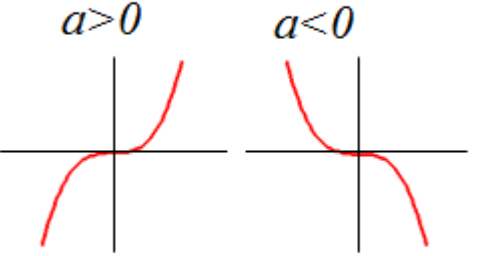
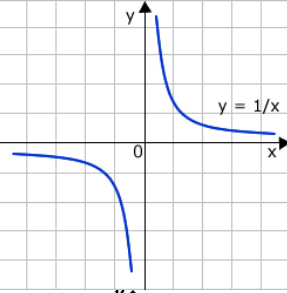
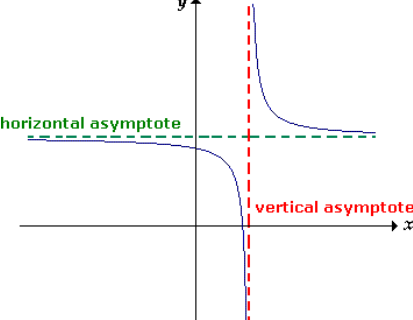
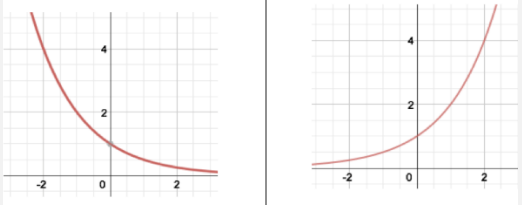
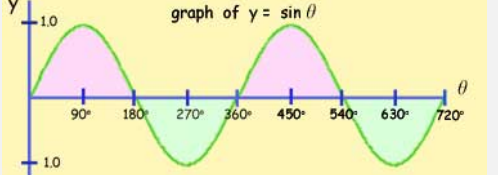
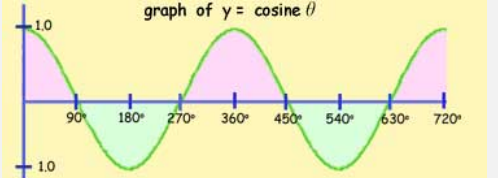


KS3 Unit 47 Function Graphs

Topic/Skill	Definition/Tips	Example
1. Quadratic Graph	<p>A 'U-shaped' curve called a parabola. The equation is of the form $y = ax^2 + bx + c$, where a, b and c are numbers, $a \neq 0$. If $a < 0$, the parabola is upside down.</p>	
2. Roots of a Quadratic	<p>A root is a solution. The roots of a quadratic are the x-intercepts of the quadratic graph.</p>	
3. Turning Point of a Quadratic	<p>A turning point is the point where a quadratic turns. On a positive parabola, the turning point is called a minimum. On a negative parabola, the turning point is called a maximum.</p>	
4. Cubic Graph	<p>The equation is of the form $y = ax^3 + k$, where k is an number. If $a > 0$, the curve is increasing. If $a < 0$, the curve is decreasing.</p>	
5. Reciprocal Graph	<p>The equation is of the form $y = \frac{A}{x}$, where A is a number and $x \neq 0$. The graph has asymptotes on the x-axis and y-axis.</p>	
6. Asymptote	<p>A straight line that a graph approaches but never touches.</p>	

7. Exponential Graph	<p>The equation is of the form $y = a^x$, where a is a number called the base.</p> <p>If $a > 1$ the graph increases.</p> <p>If $0 < a < 1$, the graph decreases.</p> <p>The graph has an asymptote which is the x-axis.</p>	
8. $y = \sin x$	<p>Key Coordinates: (0, 0), (90, 1), (180, 0), (270, -1), (360, 0)</p> <p>y is never more than 1 or less than -1. Pattern repeats every 360°.</p>	
9. $y = \cos x$	<p>Key Coordinates: (0, 1), (90, 0), (180, -1), (270, 0), (360, 1)</p> <p>y is never more than 1 or less than -1. Pattern repeats every 360°.</p>	
10. $y = \tan x$	<p>Key Coordinates: (0, 0), (45, 1), (135, -1), (180, 0), (225, 1), (315, -1), (360, 0)</p> <p>Asymptotes at $x = 90$ and $x = 270$ Pattern repeats every 360°.</p>	