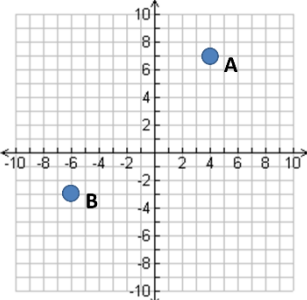
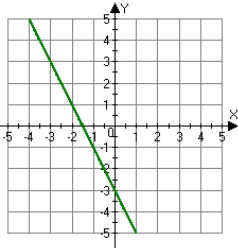
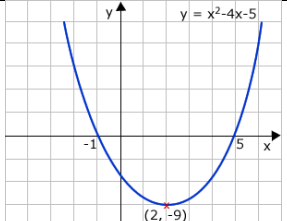
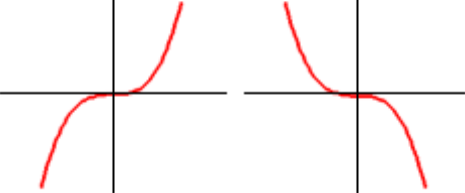
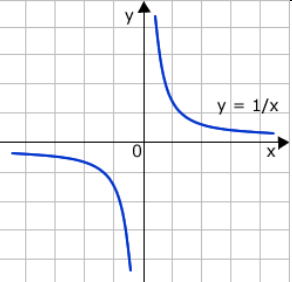
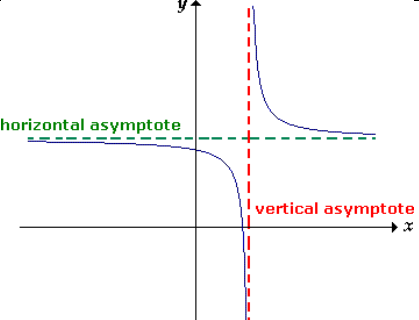
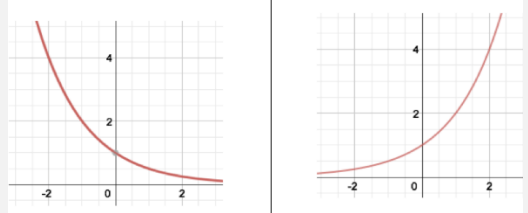
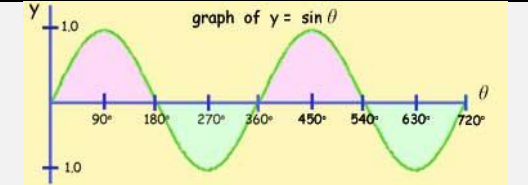
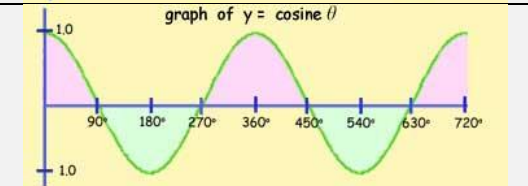
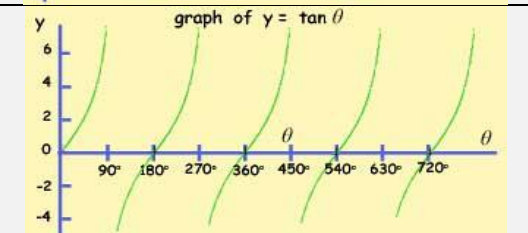
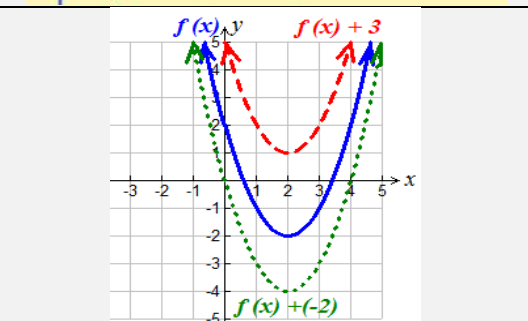
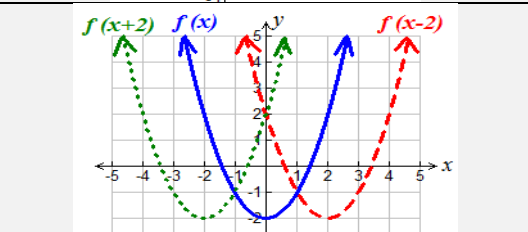
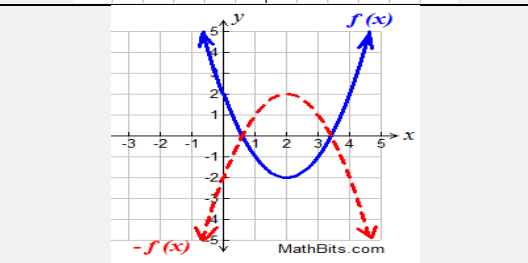


Topic/Skill	Definition/Tips	Example
1. Coordinates	Written in pairs . The first term is the x-coordinate (movement across). The second term is the y-coordinate (movement up or down)	 <p>A: (4,7) B: (-6,-3)</p>
2. Linear Graph	Straight line graph. The equation of a linear graph can contain an x-term , a y-term and a number .	<p>Example:</p>  <p>Other examples: $x = y$ $y = 4$ $x = -2$ $y = 2x - 7$ $y + x = 10$ $2y - 4x = 12$</p>
3. Quadratic Graph	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>$y = x^2 - 4x - 5$</p>
4. Cubic Graph	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>$a > 0$ $a < 0$</p> 
5. Reciprocal Graph	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>$y = \frac{1}{x}$</p>
6. Asymptote	A straight line that a graph approaches but never touches .	 <p>horizontal asymptote vertical asymptote</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>	
11. $f(x) + a$	<p>Vertical translation up a units. $\begin{pmatrix} 0 \\ a \end{pmatrix}$</p>	
12. $f(x + a)$	<p>Horizontal translation <u>left</u> a units. $\begin{pmatrix} -a \\ 0 \end{pmatrix}$</p>	
13. $-f(x)$	<p>Reflection over the x-axis.</p>	
14. $f(-x)$	<p>Reflection over the y-axis.</p>	