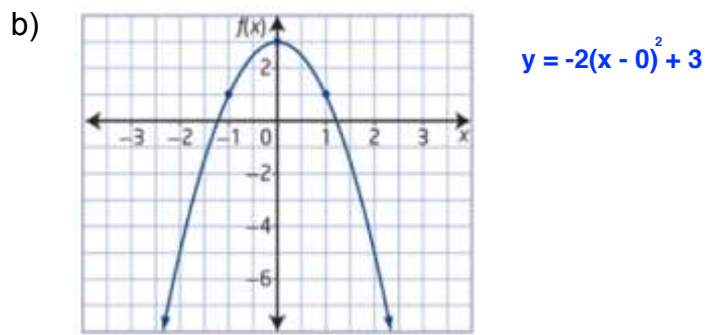
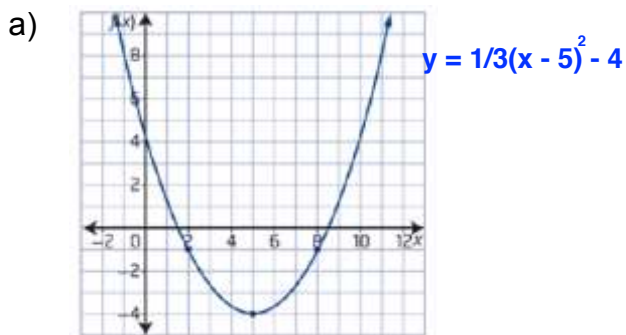


Example 1: Complete the table below.

Equation	Vertex	Transformations	Axis of Symmetry	Domain and Range
$y = (x - 3)^2 + 2$	(+3, +2)	right 3, up 2	$x = +3$	$x = \text{all real \#}$ $y = \text{greater than } 2$
$y = -2(x + 5)^2$	(-5, 0)	left 5	$x = -5$	$x = \text{all real \#}$, $y = \text{less than } 0$
$y = -2x^2 - 1$	(0, -1)	down 1	$x = 0$	$x = \text{all real \#}$, $y = \text{less than } -1$
$y = 3x^2$	(0,0)	no transformations	$x = 0$	$x = \text{all real \#}$, $y = \text{greater than } 0$

Example 2: Determine a quadratic function in vertex form for each graph:



Example 3: The graph of $y = x^2$ is reflected in the x-axis, has a horizontal translation of 2 units left, and a vertical translation of 5 units up. The equation of the transformed graph is

a) $y = -(x - 2)^2 + 5$

b) $y = -(x + 2)^2 + 5$

c) $y = -(x - 5)^2 + 2$

d) $y = -(x + 5)^2 + 2$

Example 4: When $y = 3(x + 1)^2 - 4$ is converted to the form of $y = ax^2 + bx + c$, the value of $a + b + c$ is a=3, b=6, c=-1 .

(Record your answer in the numerical response box from left to right.)

--	--	--	--