

SM3a HW #1-3 (xfrm Quad. Function)

Date _____ Period _____

- 1) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y) .
 - Identify the transformations that have been applied to the parent function.

$$y = 2x^2$$

- 2) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y) .
 - Identify the transformations that have been applied to the parent function.

$$y = x^2 - 5$$

- 3) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y) .
 - Identify the transformations that have been applied to the parent function.

$$y = 3x^2 + 2$$

- 4) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y) .
 - Identify the transformations that have been applied to the parent function.

$$y = (x - 2)^2$$

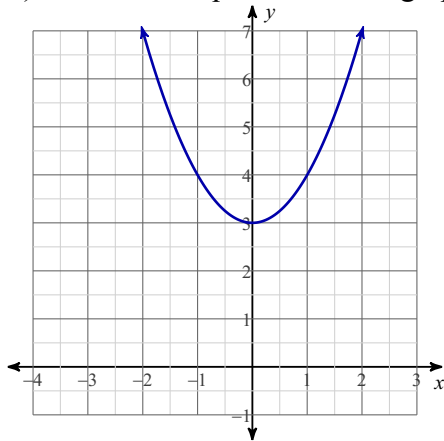
- 5) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y) .
 - Identify the transformations that have been applied to the parent function.

$$y = -5x^2 + 4$$

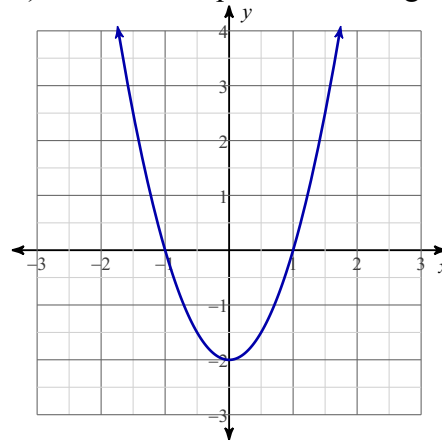
- 6) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y) .
 - Identify the transformations that have been applied to the parent function.

$$y = 6(x + 3)^2 - 1$$

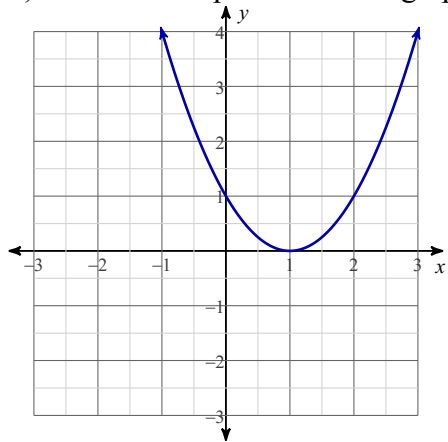
- 7) a) Identify the transformations that been applied to the parent function $y = x^2$
b) what is the equation for the graph?



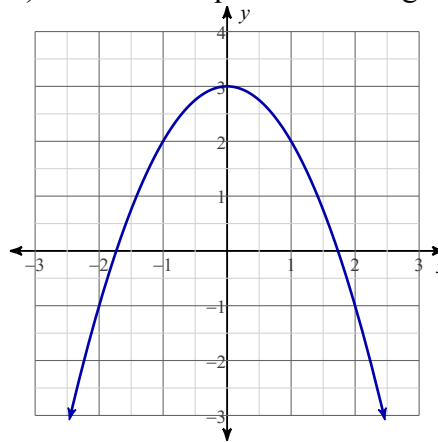
- 8) a) Identify the transformations that been applied to the parent function $y = x^2$
b) what is the equation for the graph?



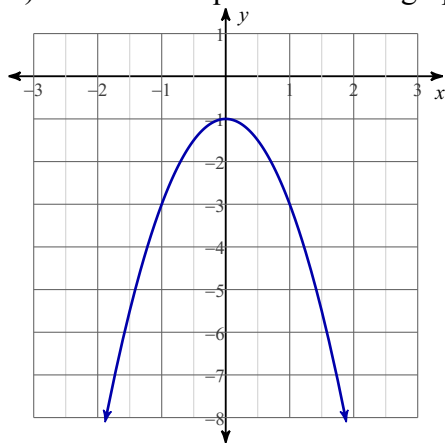
- 9) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



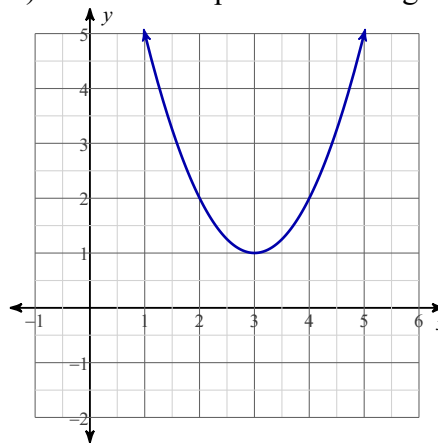
- 10) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



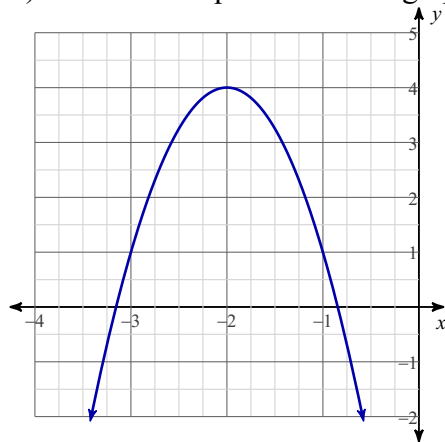
- 11) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



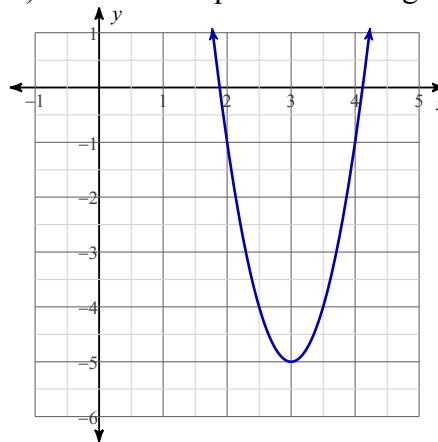
- 12) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



- 13) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



- 14) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



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 - Identify the transformations that have been applied to the parent function.

$$y = 2x^2$$

a) (0,0) (b) VSF = 2

- 3) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y).
 - Identify the transformations that have been applied to the parent function.

$$y = 3x^2 + 2$$

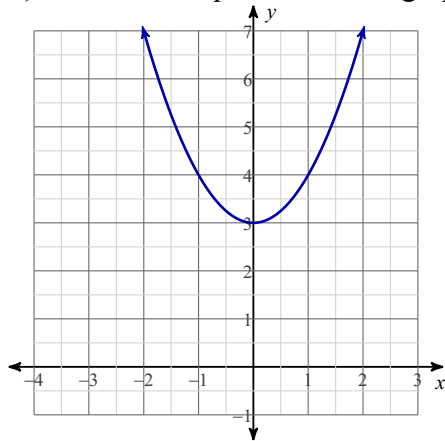
a) (0,2) (b) VSF = 3, up 2

- 5) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y).
 - Identify the transformations that have been applied to the parent function.

$$y = -5x^2 + 4$$

a) (0, 4) (b) reflected across x-axis, VSF=5, up 4

- 7) a) Identify the transformations that been applied to the parent function $y = x^2$
- b) what is the equation for the graph?



a) up 4 (b) $y = x^2 + 3$

- 2) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y).
 - Identify the transformations that have been applied to the parent function.

$$y = x^2 - 5$$

a) (0,-5) (b) down 5

- 4) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y).
 - Identify the transformations that have been applied to the parent function.

$$y = (x - 2)^2$$

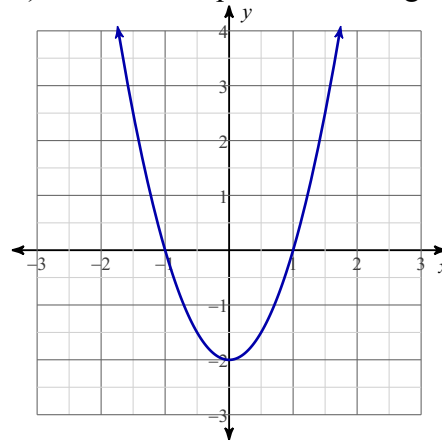
a) (2,0) (b) right 2

- 6) Compare the following equation to the parent function for quadratics $y = x^2$.
- Give the location of the vertex (x,y).
 - Identify the transformations that have been applied to the parent function.

$$y = 6(x + 3)^2 - 1$$

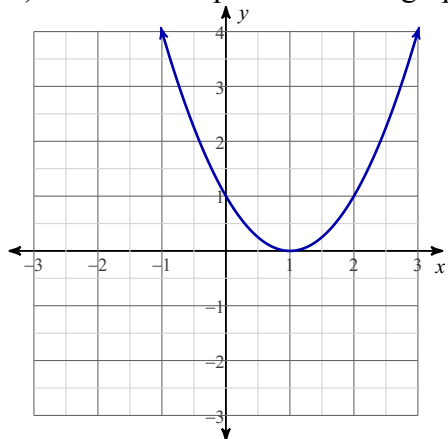
a) (-3, -1) (b) VSF=6, left 3, down 1

- 8) a) Identify the transformations that been applied to the parent function $y = x^2$
- b) what is the equation for the graph?



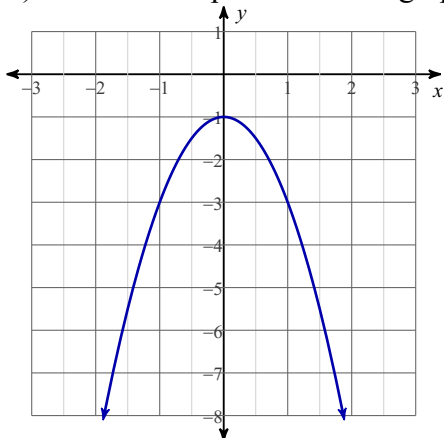
a) VSF=2, down 2 (b) $y = 2x^2 - 2$

- 9) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



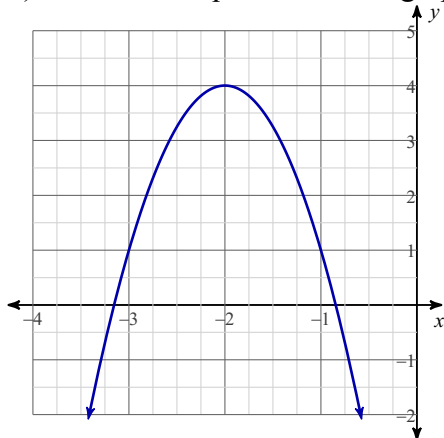
a) right 1 (b) $y = (x - 1)^2$

- 11) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



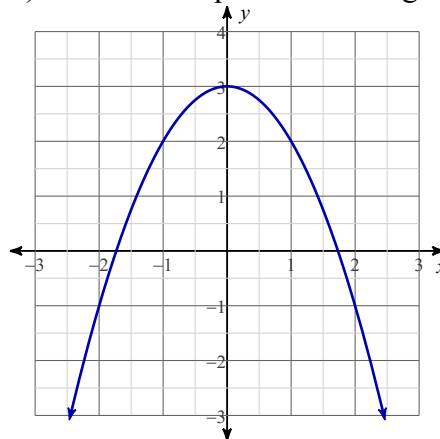
a) reflected x-axis, VSF=-2, down 1 (b) $y = -2x^2 - 1$

- 13) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



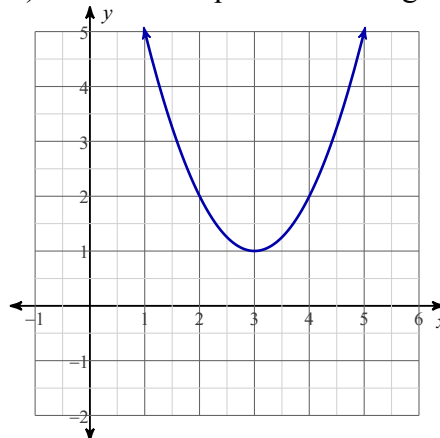
a) reflect x, VSF=3, up 4, left 2 (b) $y = -3(x + 2)^2 + 4$

- 10) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



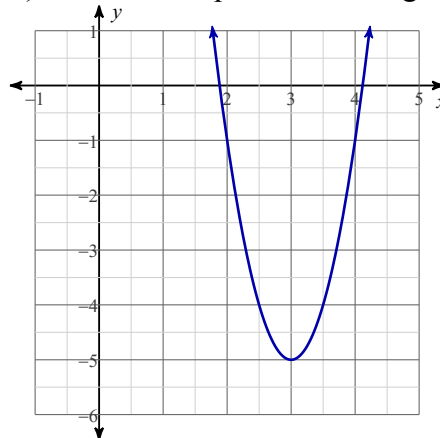
a) up 3 (b) $y = -x^2 + 3$

- 12) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



a) up 1, right 3 (b) $y = (x - 3)^2 + 1$

- 14) a) Identify the transformations that been applied to the parent function $y = x^2$
 b) what is the equation for the graph?



a) VSF=4, down 5, right 3 (b) $y = 4(x - 3)^2 - 5$