3.2- How do you graph functions in vertex and/or intercept form?

vertex (h, k)

✓a = 5

✓vertex @ (4, −3)

Vertex Form

$f(x) = a(x - h)^2 + k$

* $f(x) = 5(x - 4)^2 - 3$

+(−3)

Let's look at vertex form 1st!

1.) $y = -(x - 1)^2 + 2$ (h, k)

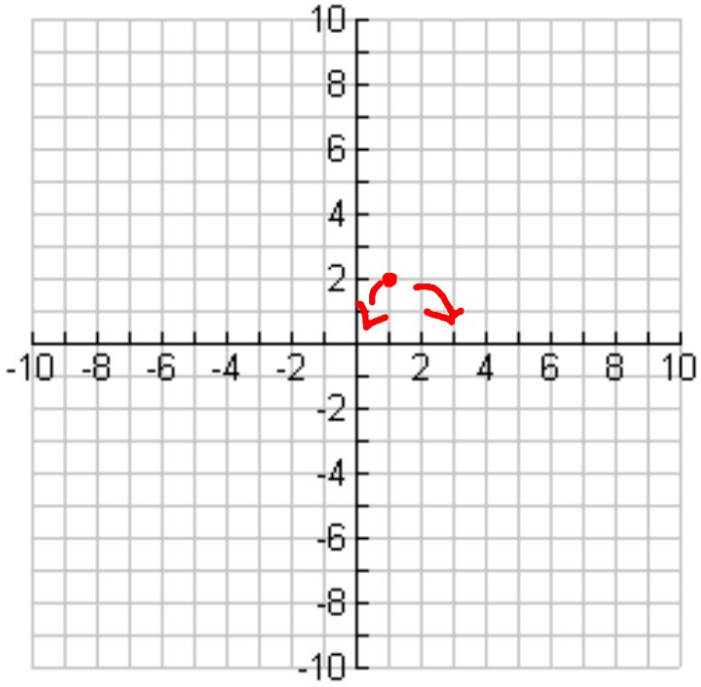
a. UP or Down

b. Vertex: (1, 2) ✓

c. A.O.S x = 1 ✓

d.

x	y



e. D: R:

2. $y = 2(x + 2)^2$

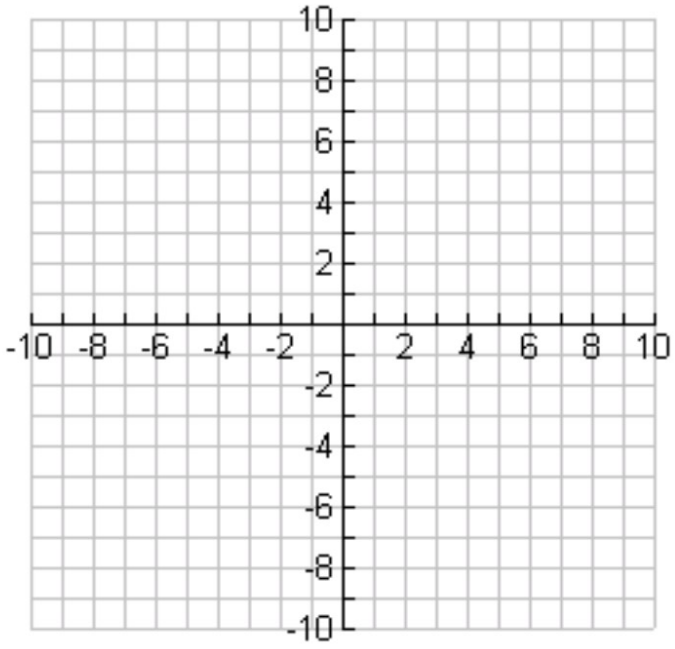
a. Up or Down

b. Vertex:

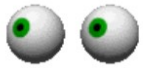
c. A.O.S x =

d.

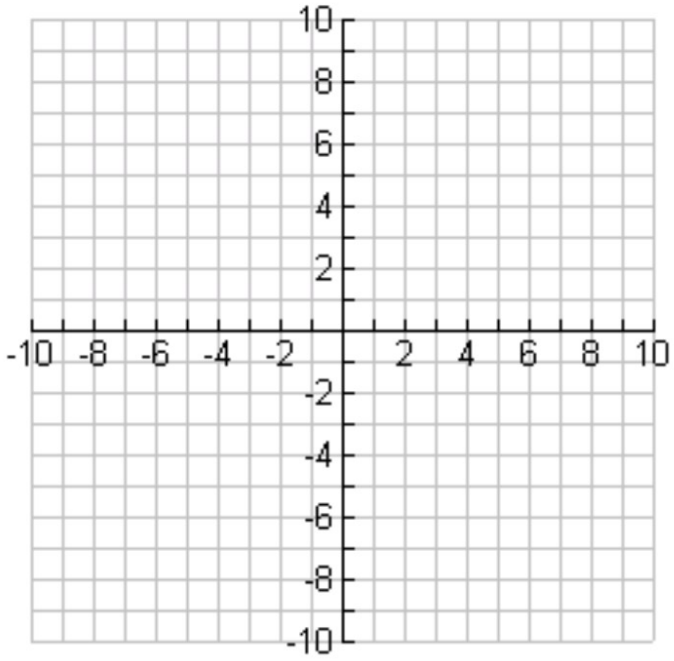
x	y



e. D: R:



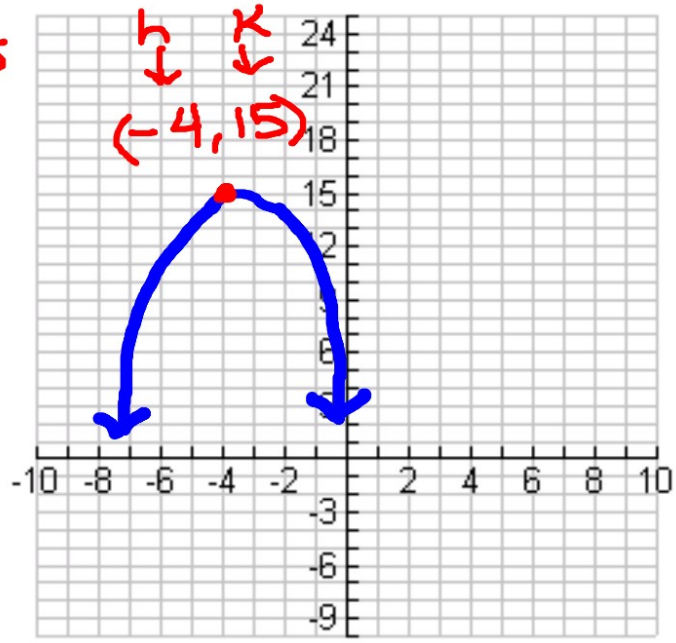
More Examples



$f(x) = a(x-h)^2 + k$

$f(x) = -a(x+4)^2 + 15$

$a = -2$



Vertex of $(-\overset{h}{3}, \overset{k}{8})$ $\quad a = -2$

* $f(x) = a(x-h)^2 + k$

$$f(x) = -2(x+3)^2 + 8$$

Vertex is $(6, -5)$ $\quad a = \frac{1}{2}$

$$f(x) = \frac{1}{2}(x-6)^2 - 5$$