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

DRILL

① Describe the transformation from $f(x) = x^2$ to $g(x) = (x-5)^2 + 3$

Right 5 Up 3

② What is the equation of a quadratic function if $a = -3$ and the vertex is $(-4, 8)$?

(-4 = h)

$f(x) = -3(x+4)^2 + 8$

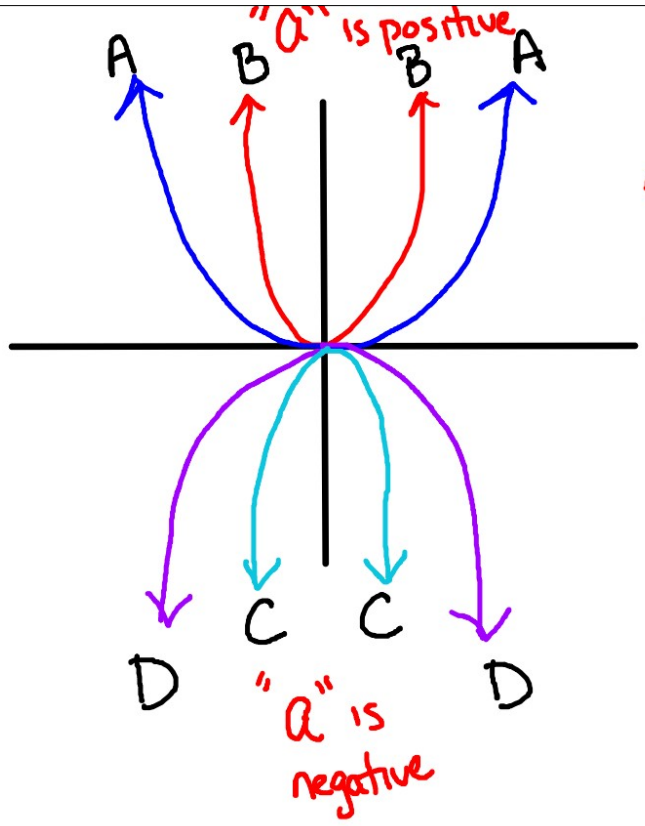
$$f(x) = a(x-h)^2 + k$$

Vertex (h, k)

① $a = 4$ vertex $(-3, 4)$ $f(x) = 4(x+3)^2 + 4$

② $a = -1$ vertex $(5, -2)$ $f(x) = -(x-5)^2 - 2$

$1x = x$



- $f(x) = 2x^2$ A
- $f(x) = -4x^2$ C
- $f(x) = -2x^2$ D
- $f(x) = 4x^2$ B