

x	$f(x) = x^2$

Each form of a quadratic function tells us something about the graph of the function.

STANDARD FORM

$$y = ax^2 + bx + c$$

VERTEX FORM

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

INTERCEPT FORM

$$y = a(x - p)(x - q)$$

Remember Quadratic Formula??

Ex. 1 Describe the graph of the function AND identify the vertex.

a) $f(x) = \frac{1}{2}x^2 + 5$

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

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

d) $m(x) = -3(x - 4)(x + 2)$

Ex 2. Describe the graph of the function AND find the vertex and x-intercepts.

$g(x) = x^2 + 8x + 11$

“describe”

“find the vertex”

“find the x-intercepts”

#1:

#2:

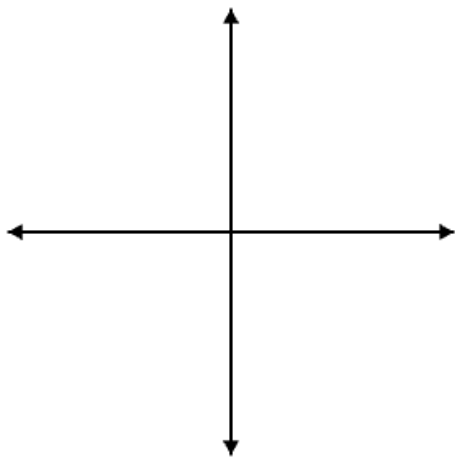
Ex 3. Write the general form (what we called standard form last year) of the quadratic function given the vertex and a point.

Vertex: $(-2, 5)$

point: $(1, -13)$

Since you are given a vertex and a point, start in vertex form.

Cubic Function



x	$f(x) = x^3$

Ex 4. Graph $f(x) = (x - 2)^3 + 1$

