

Name: _____ Date: _____

Quadratics – Vertex Form

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

This is the easiest form to use to find the vertex.

Vertex: (h, k)

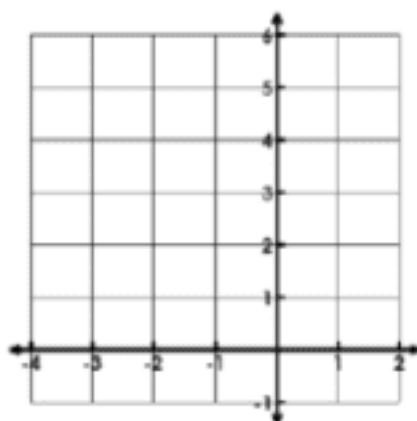
Axis of Symmetry: $x = h$

Steps to Graphing in VERTEX form:

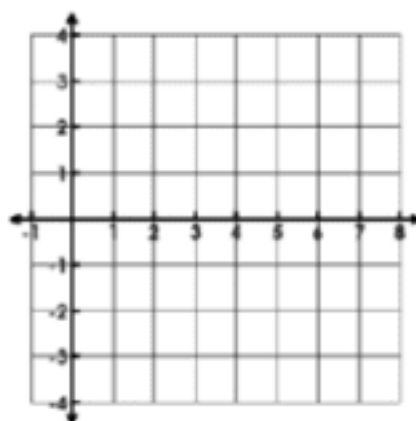
1. Find the vertex. Change the sign of h . Plot it.
 2. Find the axis of symmetry. Graph this lightly as a dashed vertical line.
 3. On your calculator: TABLE, EDIT FUCION, ENTER, START = <enter your h-value>, CALC, ENTER. Scroll up and down to get other ordered pairs.
 4. Connect in a u-shape with arrows at each end.
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Graph & identify the vertex and axis of symmetry.

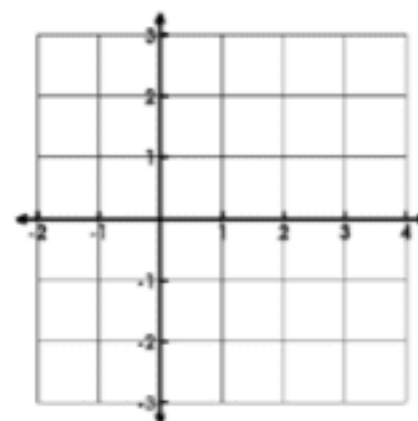
1. $f(x) = (x+2)^2 + 1$



2. $f(x) = \frac{1}{2}(x-4)^2 - 1$

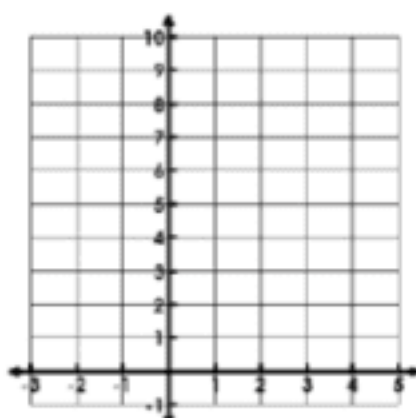


3. $f(x) = -(x-1)^2 + 2$

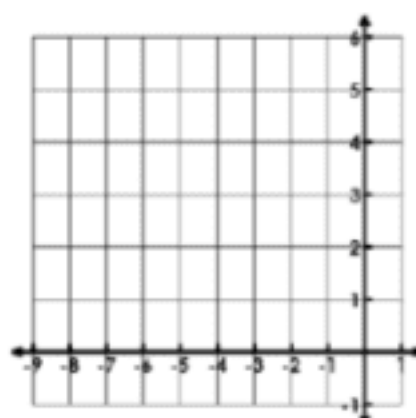


Graph & identify the vertex and axis of symmetry.

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



5. $f(x) = -\frac{1}{4}(x+4)^2 + 4$



6. $f(x) = -(x+3)^2 - 3$

