

Classwork

Lesson 14

Vertex Form of a Quadratic Function

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

a indicates a reflection across the x -axis and/or a vertical stretch or compression

h indicates a horizontal translation

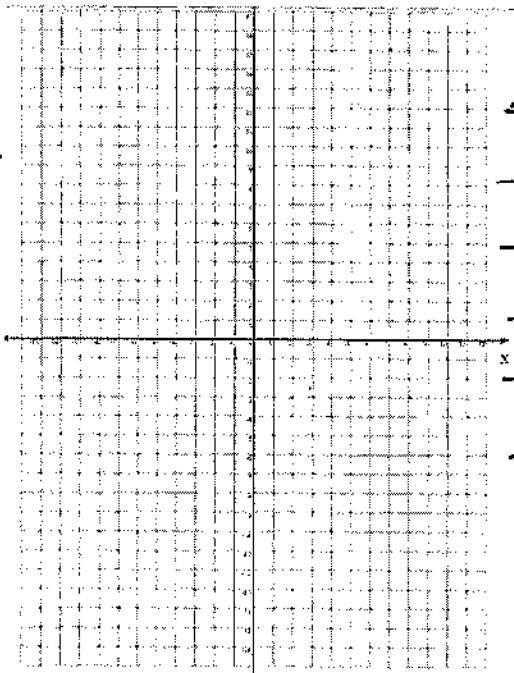
k indicates a vertical translation

The vertex of the parabola is at the point (h, k) .

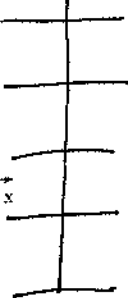
3/21

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

Vertex

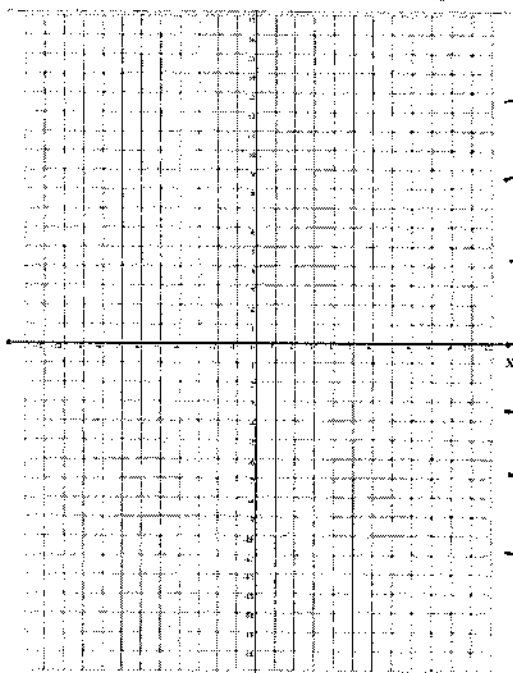


x | y



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

Vertex

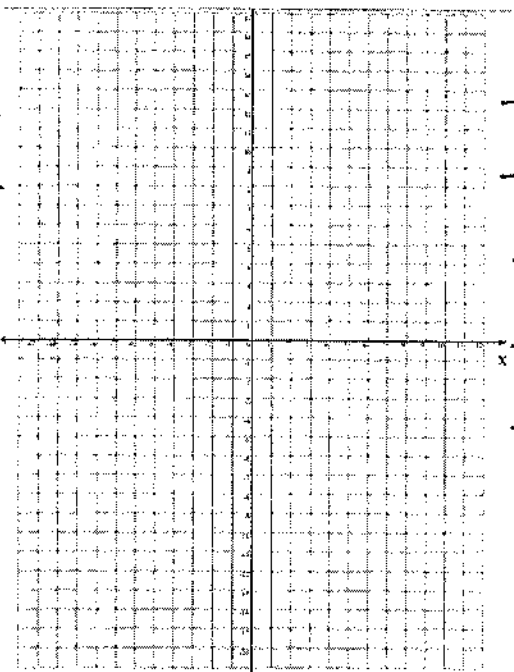


x | y



$$y = 2(x+1)^2 - 4$$

Vertex

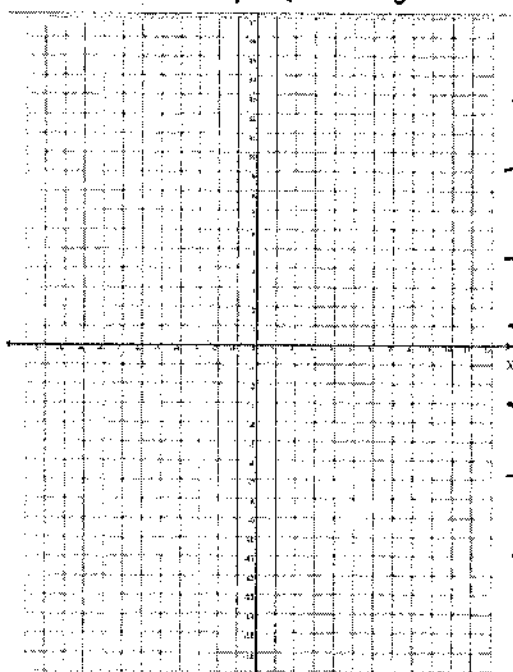


x | y



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

Vertex



x | y

