Name: _____

Period: _____

Date _____

Graphing From Roots and Vertex Practice

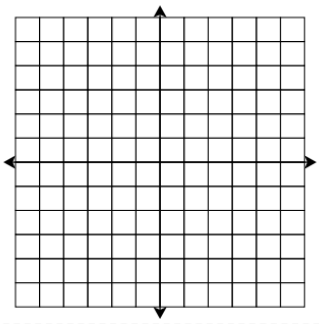
instructions: Rewrite the following functions in vertex and factored form. Then, find the roots, vertex, and y-intercept of the following functions and label them as ordered pairs (x,y) on the graph. Sketch the graph on the axes provided. Remember your tools: factoring, quadratic formula, axis of symmetry, and completing the square.

Standard Form:

$y = x^2 + 4x + 3$

Vertex Form:

Factored Form



y intercept? (,)

Vertex? (,)

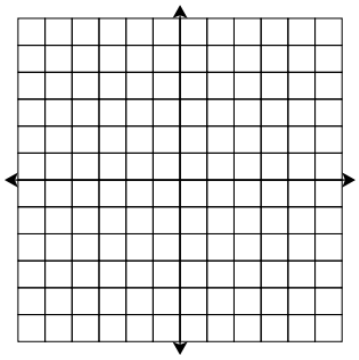
Roots? (,) and (,)

Standard Form:

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

Vertex Form:

Factored Form



y intercept? (,)

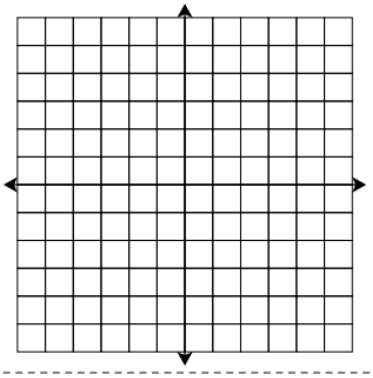
Vertex? (,)

Roots? (,) and (,)

Standard Form:

Vertex Form:

Factored Form



y intercept? (,)

Vertex? (,)

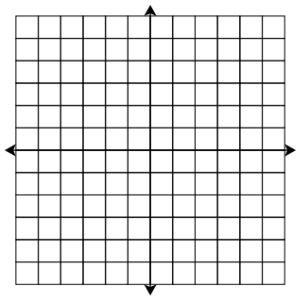
Roots? (,) and (,)

Standard Form:

Vertex Form:

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

Factored Form



y intercept? (,)

Vertex? (,)

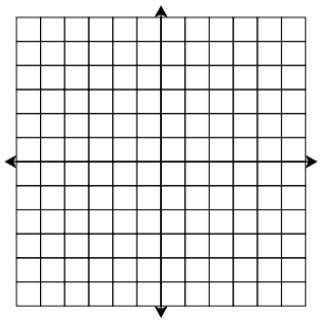
Roots? (,) and (,)

Standard Form:

Axis of Symmetry

Factored Form

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



y intercept? (,)

Vertex? (,)

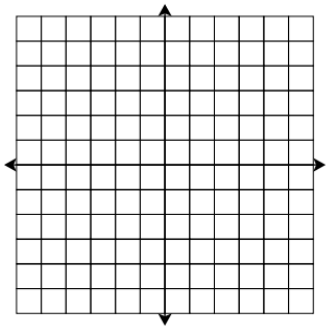
Roots? (,) and (,)

Standard Form:

Vertex Form:

$y=-(x-3)^2+4$

Quadratic Formula



y intercept? (,)

Vertex? (,)

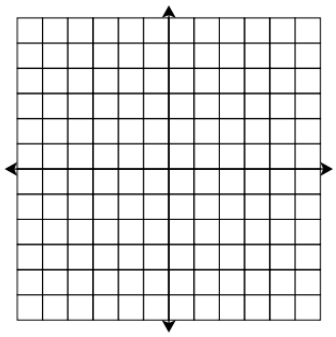
Roots? (,) and (,)

Standard Form:

Vertex Form:

$y=-2(x+3)^2+1$

Quadratic Formula



y intercept? (,)

Vertex? (,)

Roots? (,) and (,)