Write the 3 forms of a quadratic and what can be found easily from each form.

Find the x-intercepts and find the vertex for each equation.

$y = (x - 4)(x + 8)$

$y = -2(x - 5)(x + 3)$

$y = (x + 2)(x - 5)$

Find the vertex of each equation and find the y-intercept.

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

$y = -3(x - 4)^2 + 1$

$y = 5(x + 1)^2 - 6$

Consider the function $f(x) = -(x-1)(x+7)$. Find the key components to graph the function. Show your work and/or explain how to get the solution.

Opening Direction

Vertex and Line of Symmetry

X-intercepts

Y-intercept

Domain

Range

Consider the function $f(x) = 2(x + 2)^2 + 3$. Find the key components to graph the function. Show your work and/or explain how to get the solution.

Opening Direction

Vertex and Line of Symmetry

Y-intercept

Domain

Range

Write each equation in standard form.

$y = (3x + 1)(2x - 5)$

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

$y = -4(x + 2)^2 + 7$

$y = 2(x - 3)^2 + 5$

Describe the transformation

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

$y = 5(x-6)^2 - 4$