

LT #2: Standard Form of a Quadratic

1. Given $f(x) = 2x^2 - 4x - 1$
- a. Does the graph of $f(x)$ open up or down?
(5, 1)
 - b. Identify the vertex
 $X = \frac{-b}{2a} = \frac{-(-4)}{2(2)} = \frac{4}{4} = 1$ $2(1)^2 - 4(1) - 1$
 $2 - 4 - 1$
 $-2 - 1 = -3$
 - c. Identify the axis of symmetry
 - d. Identify the maximum or minimum value
 - e. Identify the domain of the function
 - f. Identify the range
 - g. Identify the y-intercept of $f(x)$. Write as a coordinate.
 - h. Write the function in vertex form
(5, 1)

1. (1 point each)

- a) Up
- b) (1, -3)
- c) X = 1
- d) min = -3
- e) \mathbb{R}
- f) $y \geq -3$
- g) (0, -1)
- h) $y = 2(x-1)^2 - 3$