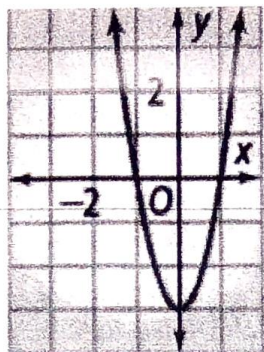
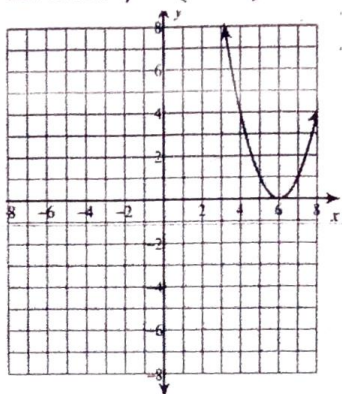


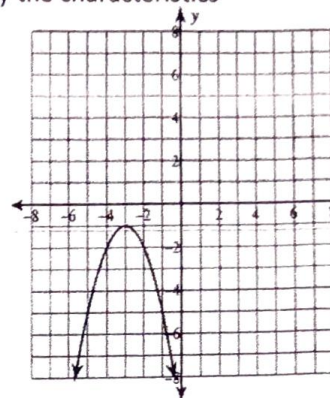
Homework (Writing Equations in Vertex Form from a Graph)

Name: _____

Write the equation of the graph in vertex form: $y = a(x - h)^2 + k$ and identify the characteristics







$a = \underline{\quad}$ $h = \underline{\quad}$ $k = \underline{\quad}$

Opens: up or down

Vertex: _____

Max or Min: _____

Axis of symmetry: _____

X-Intercept: _____

Y-Intercept: _____

Rate of Change from $x = 0$ to $x = 1$

Domain: _____

Range: _____

End behavior: As $x \rightarrow -\infty$, $y \rightarrow$

$x \rightarrow \infty$, $y \rightarrow$

Interval of Increase: _____

Interval of Decrease: _____

$a = \underline{\quad}$ $h = \underline{\quad}$ $k = \underline{\quad}$

Opens: up or down

Vertex: _____

Max or Min: _____

Axis of symmetry: _____

X-Intercept: _____

Y-Intercept: _____

Rate of Change from $x = 5$ to $x = 7$

Domain: _____

Range: _____

End behavior: As $x \rightarrow -\infty$, $y \rightarrow$

$x \rightarrow \infty$, $y \rightarrow$

Interval of Increase: _____

Interval of Decrease: _____

$a = \underline{\quad}$ $h = \underline{\quad}$ $k = \underline{\quad}$

Opens: up or down

Vertex: _____

Max or Min: _____

Axis of symmetry: _____

X-Intercept: _____

Y-Intercept: _____

Rate of Change from $x = -4$ to $x = -1$

Domain: _____

Range: _____

End behavior: As $x \rightarrow -\infty$, $y \rightarrow$

$x \rightarrow \infty$, $y \rightarrow$

Interval of Increase: _____

Interval of Decrease: _____

Name: _____

Date: _____

HW: Graphing Quadratics in Vertex Form

1) Determine the vertex of each of the following

a. $f(x) = (x - 5)^2 + 1$

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

c. $f(x) = \frac{2}{3}(x - 2)^2$

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

2) Match the graph with the equation

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

$f(x) = (x + 3)^2 + 1$ _____

$f(x) = (x - 3)^2 - 1$ _____

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

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

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

$f(x) = -(x - 3)^2 - 1$ _____

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

