

Characteristics of Quadratic Functions Practice Worksheet B

Name _____ Date _____

1. $f(x) = 2x^2 + 4x + 1$

Domain: _____ Range: _____

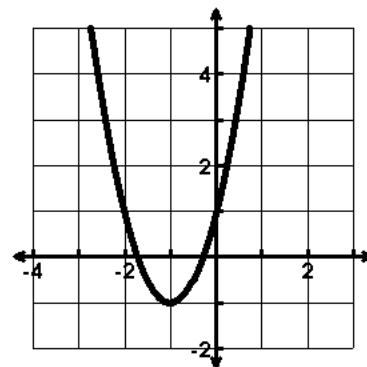
Vertex: _____ AOS: _____

x-intercept(s): _____ y-intercept: _____

Interval of Increase: _____ Interval of Decrease: _____

Extrema: _____ End Behavior: As $x \rightarrow +\infty$, $f(x) \rightarrow$ _____
As $x \rightarrow -\infty$, $f(x) \rightarrow$ _____

Rate of Change $-1 \leq x \leq 0$: _____



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

Domain: _____ Range: _____

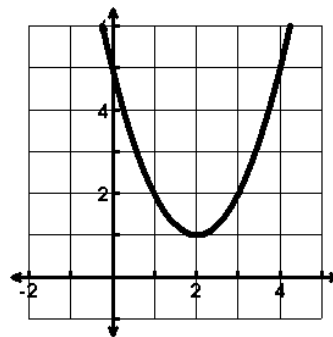
Vertex: _____ AOS: _____

Zeros(s): _____ y-intercept: _____

Interval of Increase: _____ Interval of Decrease: _____

Extrema: _____ End Behavior: As $x \rightarrow +\infty$, $f(x) \rightarrow$ _____
As $x \rightarrow -\infty$, $f(x) \rightarrow$ _____

Rate of Change $0 \leq x \leq 2$: _____



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

Domain: _____ Range: _____

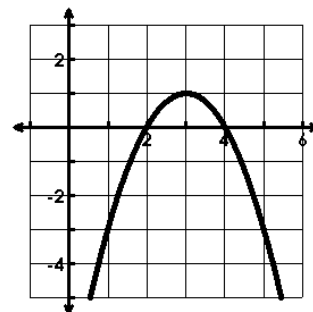
Vertex: _____ AOS: _____

Root(s): _____ y-intercept: _____

Interval of Increase: _____ Interval of Decrease: _____

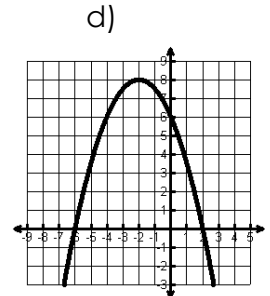
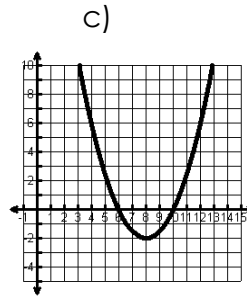
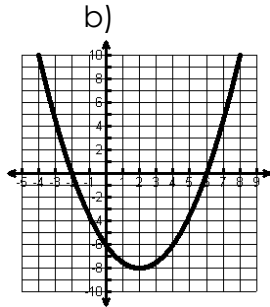
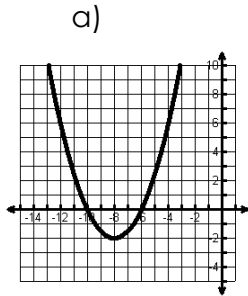
Extrema: _____ End Behavior: As $x \rightarrow +\infty$, $f(x) \rightarrow$ _____
As $x \rightarrow -\infty$, $f(x) \rightarrow$ _____

Rate of Change $1 \leq x \leq 3$: _____



4. The quadratic function $f(x)$ has these characteristics, which graph could be $f(x)$?

- The vertex is located at $(8, -2)$.
- The range is $-2 \leq f(x) < \infty$.



5. This graph represents a quadratic function.

Domain: _____ Range: _____

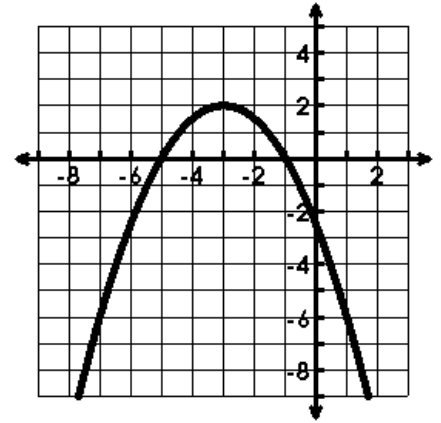
Vertex: _____ AOS: _____

Solution(s): _____ y-intercept: _____

Interval of Increase: _____ Interval of Decrease: _____

Extrema: _____ End Behavior: As $x \rightarrow +\infty$, $f(x) \rightarrow$ _____
As $x \rightarrow -\infty$, $f(x) \rightarrow$ _____

Rate of Change $-7 \leq x \leq -3$: _____



6. Graph the function and write the characteristics.

$f(x) = x^2 - 6x + 8$

Domain: _____ Range: _____

Zeros: _____ Y-Intercept: _____

Vertex: _____ AOS: _____

Interval of Increase: _____ Interval of Decrease: _____

Extrema: _____ End Behavior: As $x \rightarrow +\infty$, $y \rightarrow$ _____
As $x \rightarrow -\infty$, $y \rightarrow$ _____

Rate of Change $-1 \leq x \leq 4$: _____

