

Name: _____ Date: _____

Characteristics of Quadratics

Interval Notation:

Represents an interval as a _____. The numbers are the endpoints of the interval. _____ and/or _____ are used to show excluded or included.

Interval :



Domain and Range:

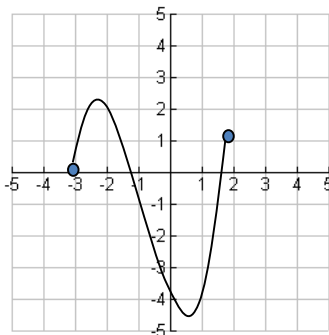
Domain: The _____ that are contained in the graph. Write it from _____.

Range: The _____ that are contained in the graph. Write it from _____.

Examples:

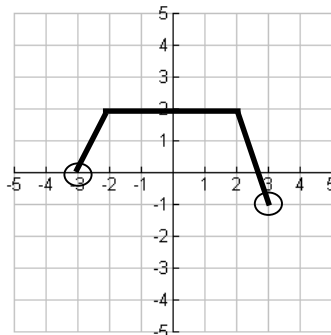
1) D: _____

R: _____



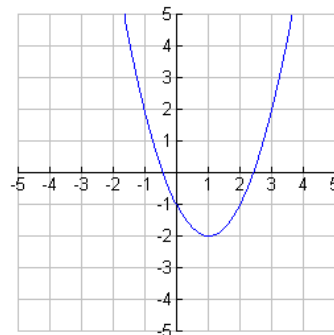
2) D: _____

R: _____



3) D: _____

R: _____



Interval of Increasing and Decreasing:

Always read from _____ to _____

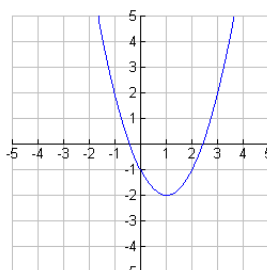
- If your finger is going up, the graph is _____.
- If going down, the graph is _____.

Example:

Inc: _____

Dec: _____

****Only use Parentheses!****



Extrema:

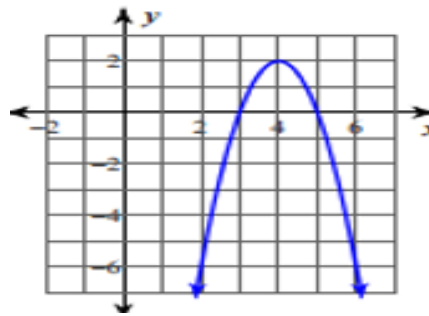
Maximum value: the _____ point seen in the data or on the graph.

Minimum value: the _____ point seen in the data or on the graph.

Extrema: _____

Axis of Symmetry: _____

Zeros/Roots/Solutions/Intercepts



Intercepts

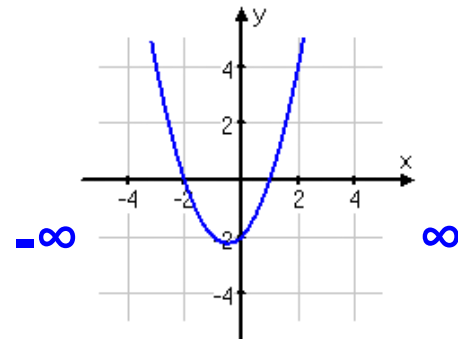
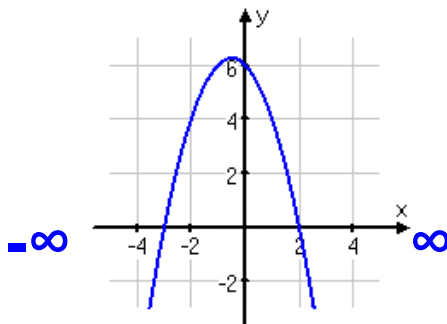
- **x-intercept** – the point at which the line intersects the _____ . ()
- **y-intercept** – the point at which the line intersects the _____ . ()

End Behavior:

- What a function keeps doing after it leaves the graph
- _____ : As x goes to the right, where does y go?
- _____ : As x goes to the left, where does y go?

1) $x \rightarrow -\infty \quad f(x) \rightarrow \underline{\hspace{2cm}}$
 $x \rightarrow +\infty \quad f(x) \rightarrow \underline{\hspace{2cm}}$

2) $x \rightarrow -\infty \quad f(x) \rightarrow \underline{\hspace{2cm}}$
 $x \rightarrow +\infty \quad f(x) \rightarrow \underline{\hspace{2cm}}$



- | | |
|-----------------------|---|
| a. Domain: _____ | b. Range: _____ |
| c. Extrema: _____ | d. Axis of Sym: _____ |
| e. Increasing: _____ | f. Decreasing: _____ |
| g. Y-Intercept: _____ | h. Solutions: _____ |
| i. End Behavior: | $x \rightarrow -\infty \quad f(x) \rightarrow \underline{\hspace{2cm}}$ |
| | $x \rightarrow +\infty \quad f(x) \rightarrow \underline{\hspace{2cm}}$ |

