

Try It!

5. Refer to the previous problem for the following questions.
- What does the y -intercept represent in this real-world context?
 - What does the x -intercept represent in this real-world context?
 - What is the solution to this situation?



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Section 3 – Topic 8

Key Features of Graphs of Functions – Part 2

Let's discuss other key features of graphs of functions.

- **Domain:** the input or the ____ values.
- **Range:** the _____ or the y -values.
- **Increasing intervals:** as the x -values _____, the y -values _____.
- **Decreasing intervals:** as the x -values _____, the y -values _____.
- **Relative maximum:** the point on a graph where the interval changes from _____ to _____.
- **Relative minimum:** the point on a graph where the interval changes from _____ to _____.

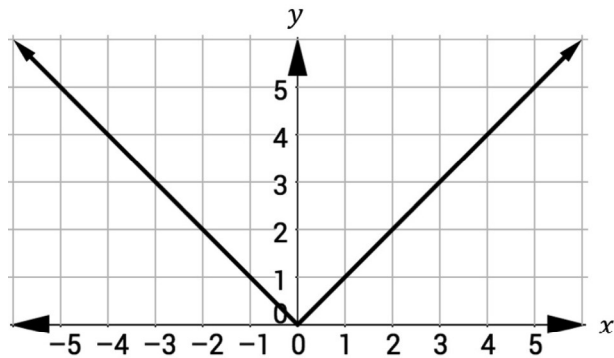
STUDY EDGE TIP

We read a graph from left to right to determine if it is increasing or decreasing, like reading a book.



Let's Practice!

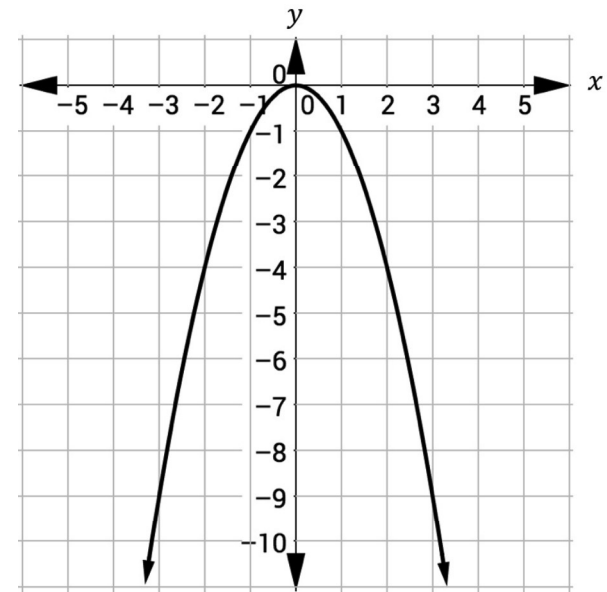
1. Use the following graph of an **absolute value function** to answer the questions below.



- Define the domain.
- Define the range.
- Where is the graph increasing?
- Where is the graph decreasing?
- Identify any relative maximums.
- Identify any relative minimums.

Try It!

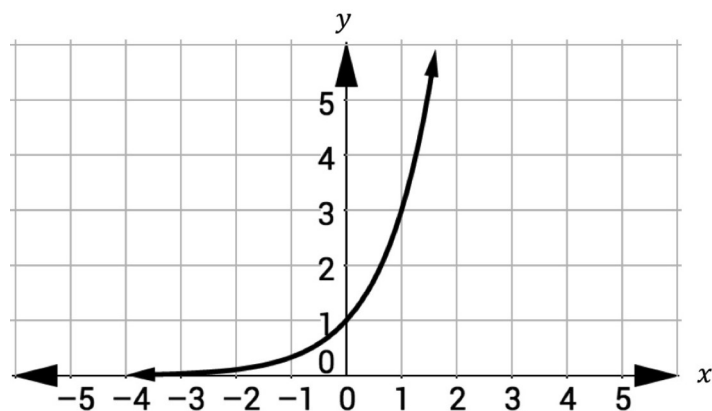
2. Use the graph of the following **quadratic function** to answer the questions below.



- Define the domain.
- Define the range.
- Where is the graph increasing?
- Where is the graph decreasing?
- Identify any relative maximums.
- Identify any relative minimums.

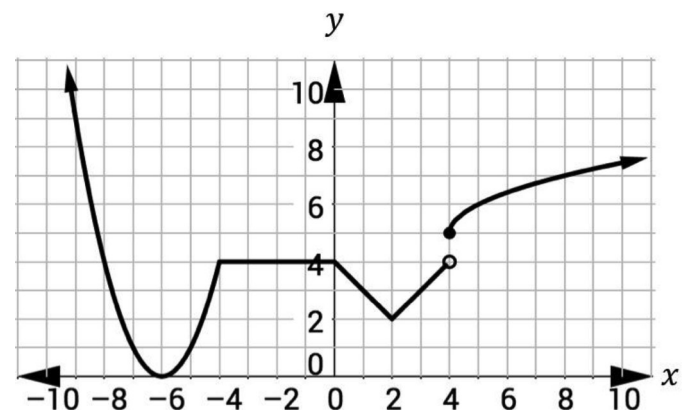


3. Describe everything you know about the key features of the following graph of an **exponential function**.



BEAT THE TEST!

1. The following graph is a **piecewise function**.



Which of the following statements are true about the graph? Select all that apply.

- The graph is increasing when the domain is $-6 < x < -4$.
- The graph has exactly one relative minimum.
- The graph is increasing when $-4 \leq x \leq 0$.
- The graph is increasing when $x > 4$.
- The graph is decreasing when the domain is $\{x|x < -6 \cup x > 2\}$.
- The range is $\{y|0 \leq y < 4 \cup y \geq 5\}$.
- There is a relative minimum at $(2, 2)$.



**Algebra
Wall**

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