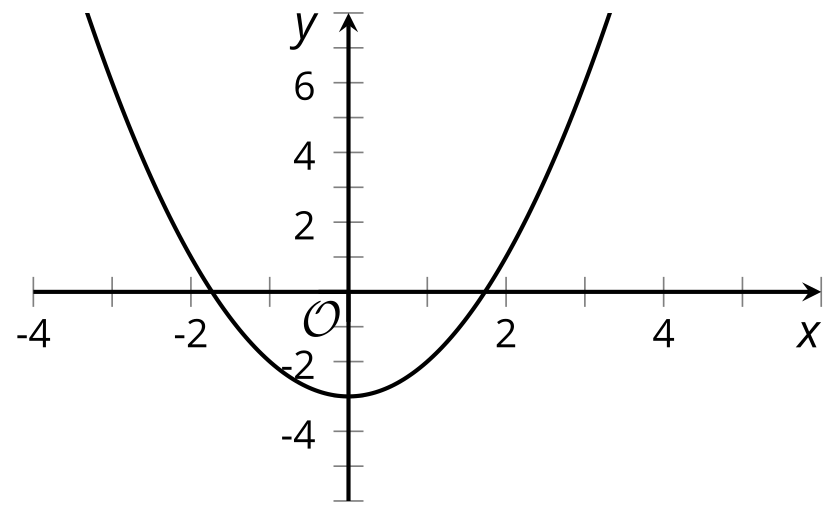
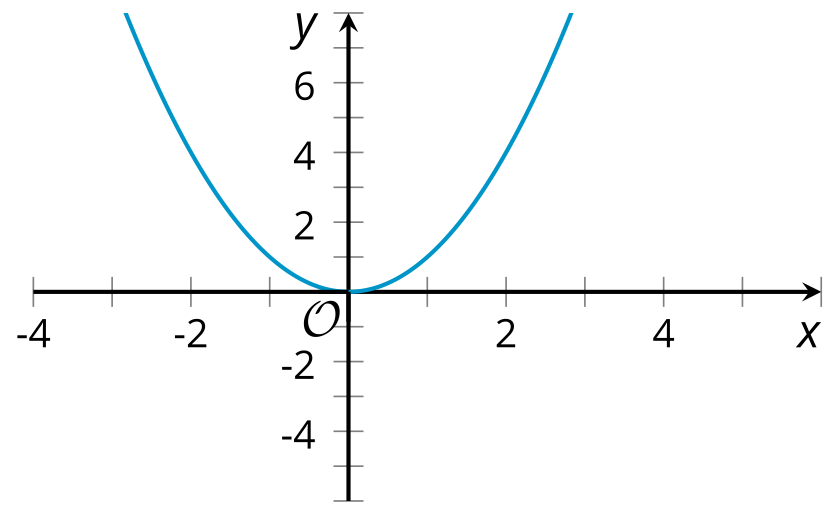
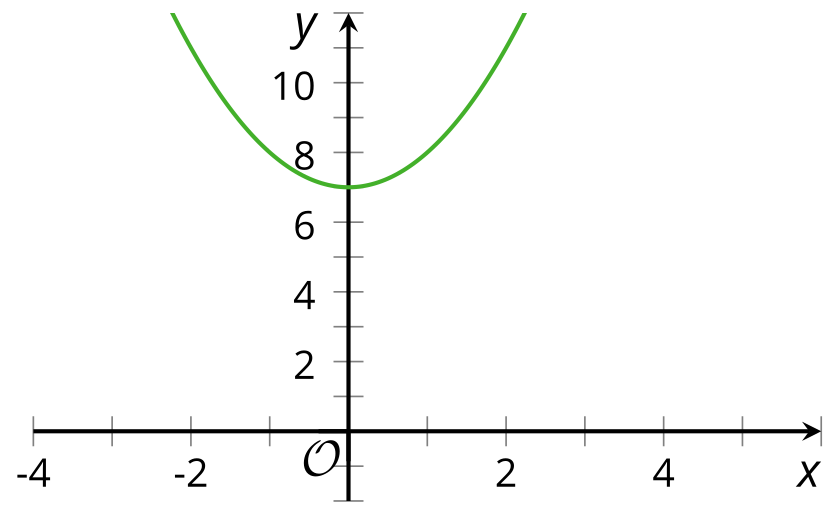
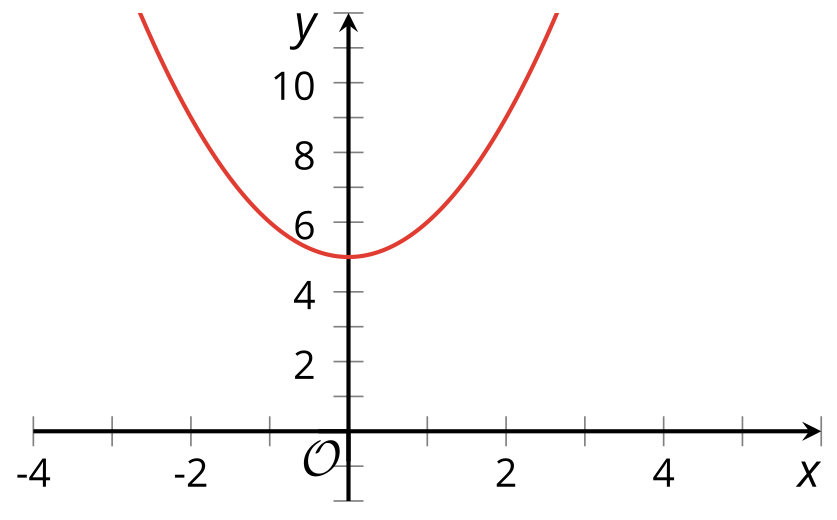
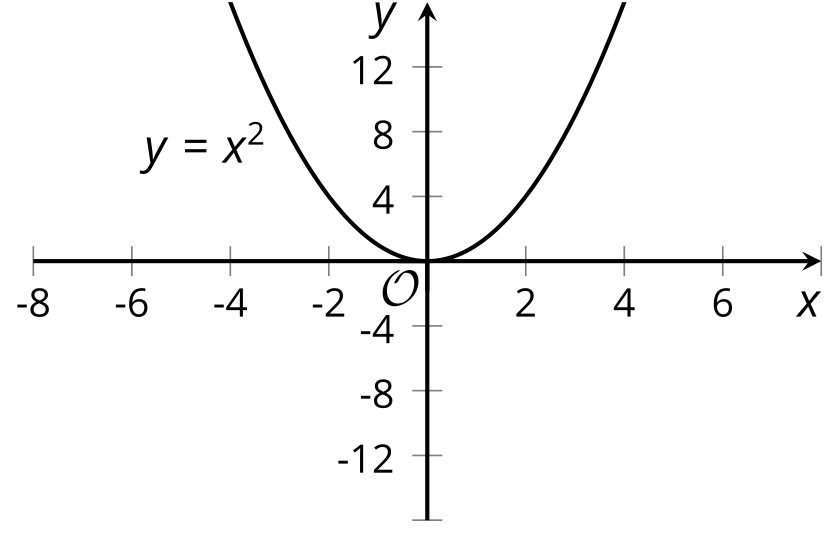
### Lesson 12 Practice Problems

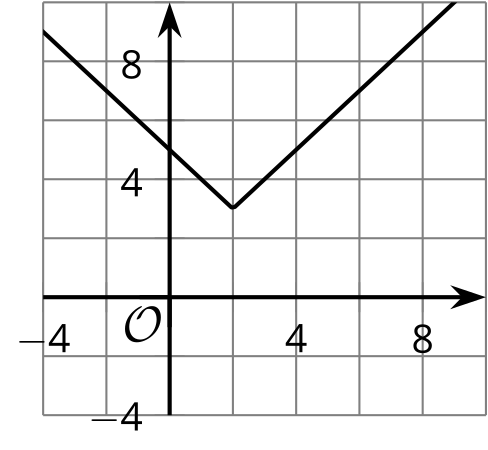
1. Here are four graphs. Match each graph with a quadratic equation that it represents.

* Graph A
* 
* Graph B
* 
* Graph C
* 
* Graph D
* 
  1. Graph A
  2. Graph B
  3. Graph C
  4. Graph D

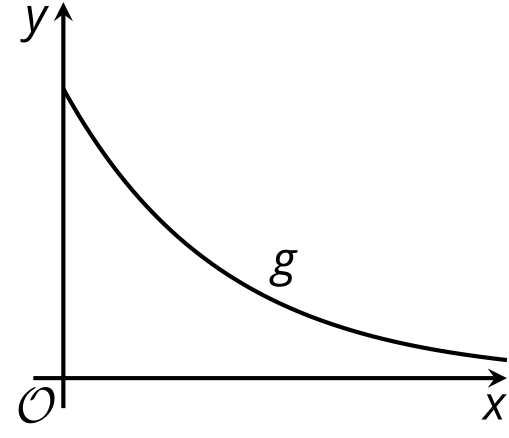
1. The two equations and are equivalent.
   1. Which equation helps find the -intercepts most efficiently?
   2. Which equation helps find the -intercept most efficiently?
2. Here is a graph that represents .

* On the same coordinate plane, sketch and label the graph that represents each equation:
* 

1. Select **all** equations whose graphs have a -intercept with a positive -coordinate.
   1. Describe how the graph of has to be shifted to match the given graph.
   2. Write an equation for the function represented by the graph.

* 
* (From Unit 4, Lesson 14.)

1. Here is a graph of the function given by .

* What can you say about the value of ? Explain how you know.
* 
* (From Unit 5, Lesson 13.)
  1. What are the -intercepts of the graph that represents ? Explain how you know.
  2. What is the -coordinate of the vertex of the graph that represents ? Explain how you know.
  3. Find the -coordinate of the vertex. Show your reasoning.
  4. Sketch a graph of .
* (From Unit 6, Lesson 11.)

1. Determine the -intercepts, the vertex, and the -intercept of the graph of each equation.

| * equation | * -intercepts | * vertex | * -intercept |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

* (From Unit 6, Lesson 11.)

1. Equal amounts of money were invested in stock A and stock B. In the first year, stock A increased in value by 20%, and stock B decreased by 20%. In the second year, stock A decreased in value by 20%, and stock B increased by 20%.

* Was one stock a better investment than the other? Explain your reasoning.
* (From Unit 5, Lesson 15.)



© CC BY 2019 by Illustrative Mathematics®