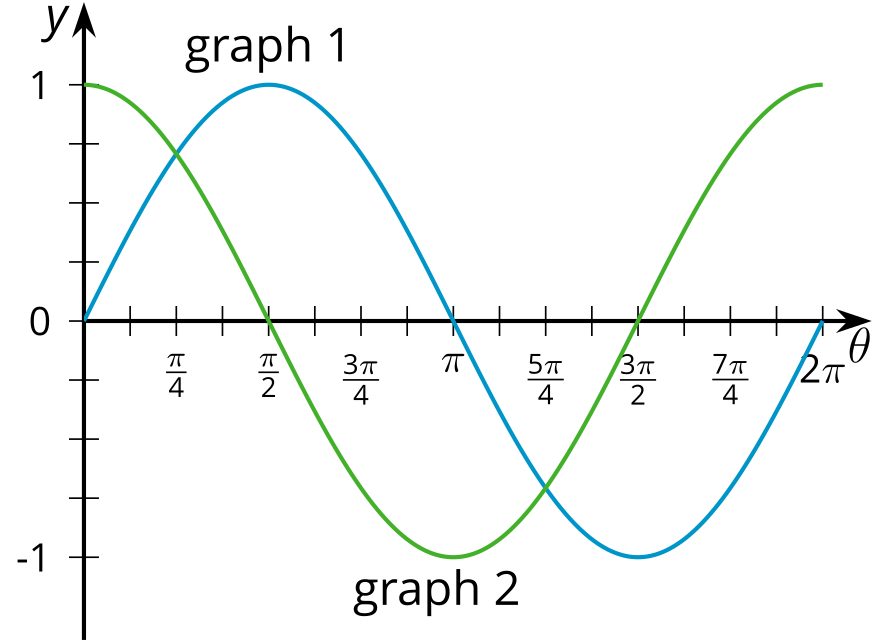
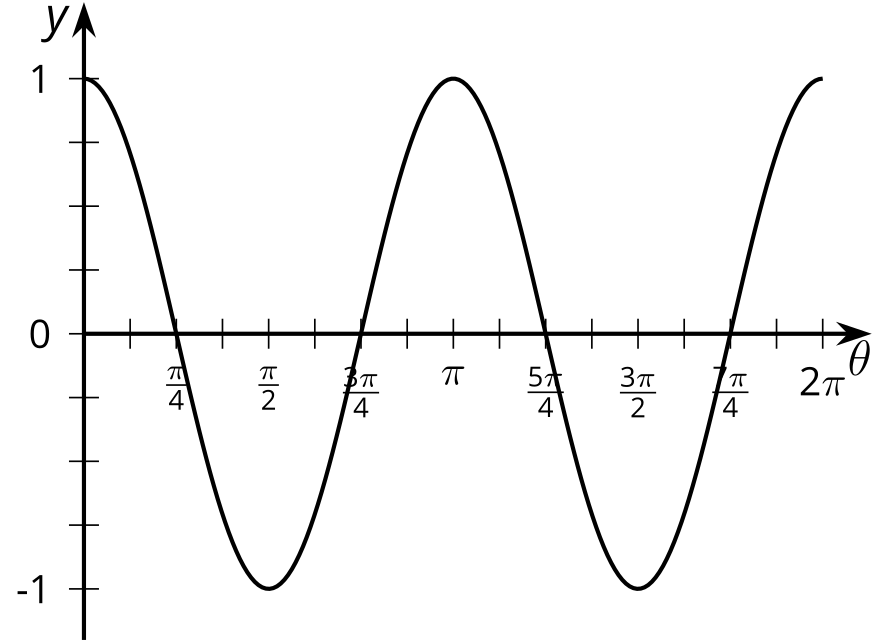
### Lesson 9 Practice Problems

1. Which statement is *not* true for the function given by , for values of between 0 and ?
   1. The outputs of the function range from -1 to 1.
   2. only when
   3. only when
   4. for
2. Angle , measured in radians, satisfies . What could the value of be? Select **all** that apply.
   1. 0
3. Here are the graphs of two functions.
   1. Which is the graph of ? Explain how you know.
   2. Which is the graph of ? Explain how you know.

* 

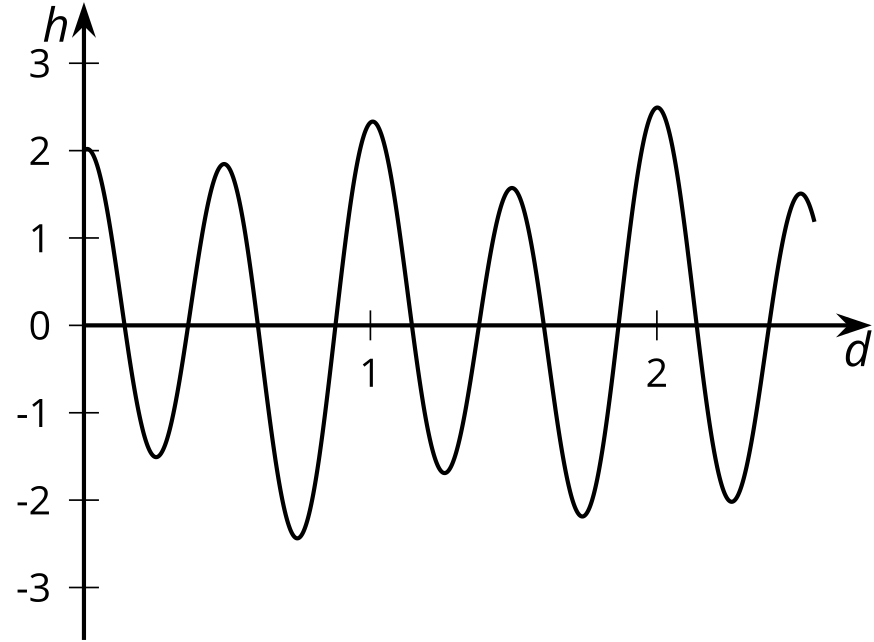
1. Which statements are true for *both* functions and ? Select **all** that apply.
   1. The function is periodic.
   2. The maximum value is 1.
   3. The maximum value occurs at .
   4. The period of the function is .
   5. The function has a value of about 0.71 when .
   6. The function has a value of about 0.71 when .
2. Here is a graph of a function .

* 
* The function is either defined by or . Which definition is correct? Explain how you know.

1. The minute hand on a clock is 1.5 feet long. The end of the minute hand is 6 feet above the ground at one time each hour. How many feet above the ground could the center of the clock be? Select **all** that apply.
   1. 4.5
   2. 5
   3. 6
   4. 7
   5. 7.5

* (From Unit 6, Lesson 7.)

1. Here is a graph of the water level height, , in feet, relative to a fixed mark, measured at a beach over several days, .

* 
  1. Explain why the water level is a function of time.
  2. Describe how the water level varies each day.
  3. What does it mean in this context for the water level to be a periodic function of time?
* (From Unit 6, Lesson 8.)



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