

Ready, Set, Go!

Ready

Topic: Reading function values in a piece-wise defined graph.



Use the graph to find the indicated function value.

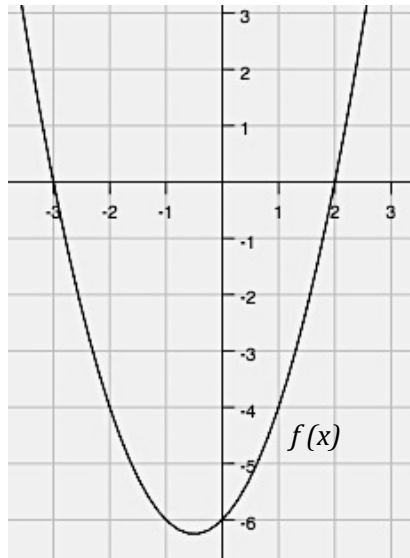
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1. a.)  $f(-3) =$

b.)  $f(-2) =$

c.)  $f(0) =$

d.)  $f(2) =$

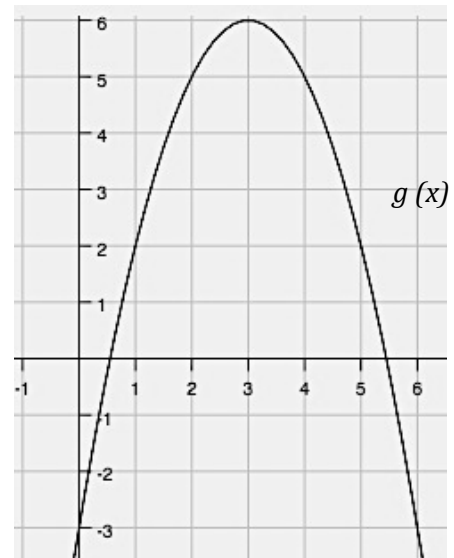


2. a.)  $g(0) =$

b.)  $g(2) =$

c.)  $g(0) =$

d.)  $g(5) =$

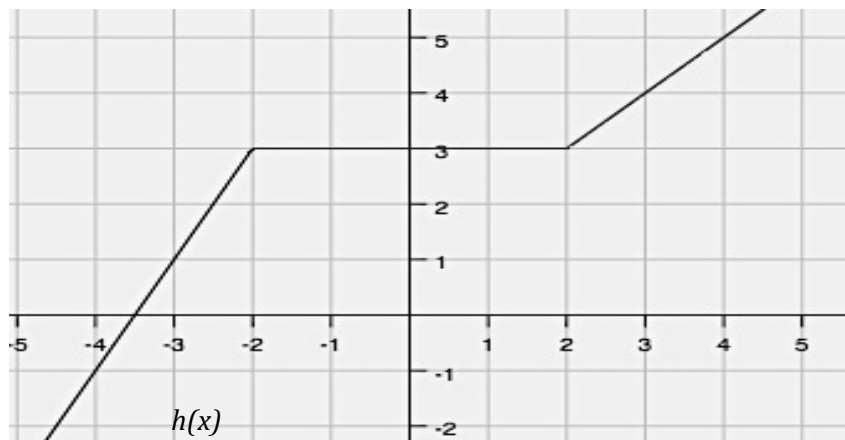


3. a.)  $h(-4) =$

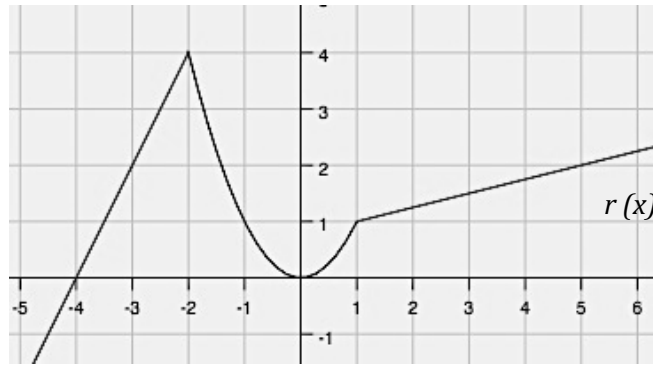
b.)  $h(0) =$

c.)  $h(2) =$

d.)  $h(4) =$

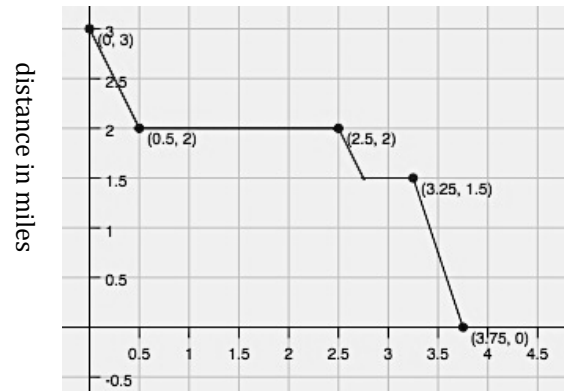


4. a.)  $r(-3) =$   
 b.)  $r(-1) =$   
 c.)  $r(0) =$   
 d.)  $r(5) =$



5. Isaac lives 3 miles away from his school. School ended at 3 pm and Isaac began his walk home with his friend Tate who lives 1 mile away from the school, in the direction of Isaac's house. Isaac stayed at Tate's house for a while and then started home. On the way he stopped at the library. Then he hurried home. The graph at the right is a **piece-wise defined function** that shows Isaac's distance from home during the time it took him to arrive home.

- a.) How much time passed between school ending and Isaac's arrival home?  
 b.) How long did Isaac stay at Tate's house?  
 c.) How far is the library from Isaac's house?



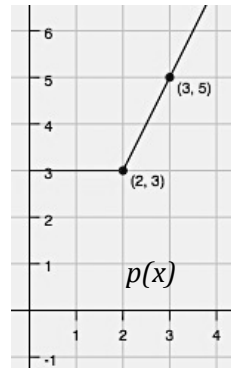
- d.) Where was Isaac, 3 hours after school ended?  
 e.) Use function notation to write a mathematical sentence that says the same thing as question (d.)  
 f.) When was Isaac walking the fastest? How fast was he walking?



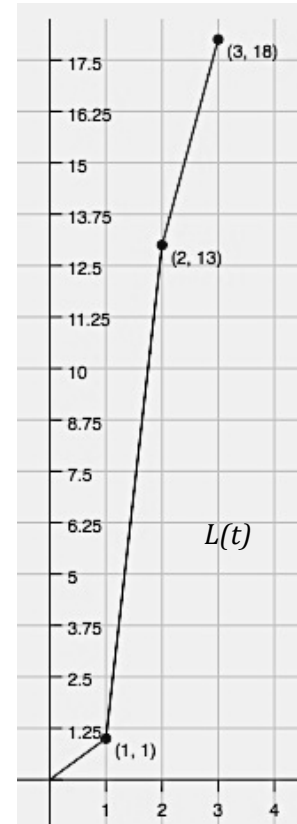
## Set

Topic: Writing piece-wise defined functions

6. A parking garage charges \$3 for the first two hours that a car is parked in the garage. After that, the hourly fee is \$2 per hour. Write a piece-wise function  $p(x)$  for the cost of parking a car in the garage for  $x$  hours. (The graph of  $p(x)$  is shown.)



7. Lexie completed an 18 mile triathlon. She swam 1 mile in 1 hour, bicycled 12 miles in 1 hour, and then ran 5 miles in 1 hour. The graph of Lexie's distance versus time is shown. Write a piecewise function  $L(t)$  for the graph.



## Go

Topic: Using the point-slope formula to write the equations of lines.

Write the equation of the line (in point-slope form) that contains the given slope and point.

8.  $p: (1, 2); m = 3$

9.  $p: (1, -2); m = -1$

10.  $p: (5, -1); m = 2$

Write the equation of the line (in point-slope form) that contains the given points.

11.  $K(0, 0); L(-4, 5)$

12.  $X(-1, 7); Y(3, -1)$

13.  $T(-1, -9); V(5, 18)$

