

G. Further Examples

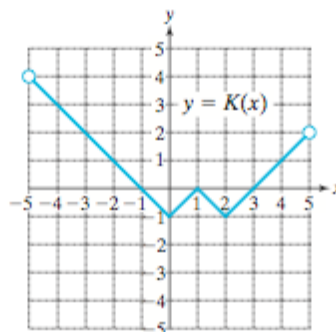
For Exercises 86–95, refer to the functions $y = f(x)$ and $y = g(x)$, defined as follows:

$$f = \{(-3, 5), (-7, -3), (-\frac{3}{2}, 4), (1.2, 5)\}$$

$$g = \{(0, 6), (2, 6), (6, 0), (1, 0)\}$$

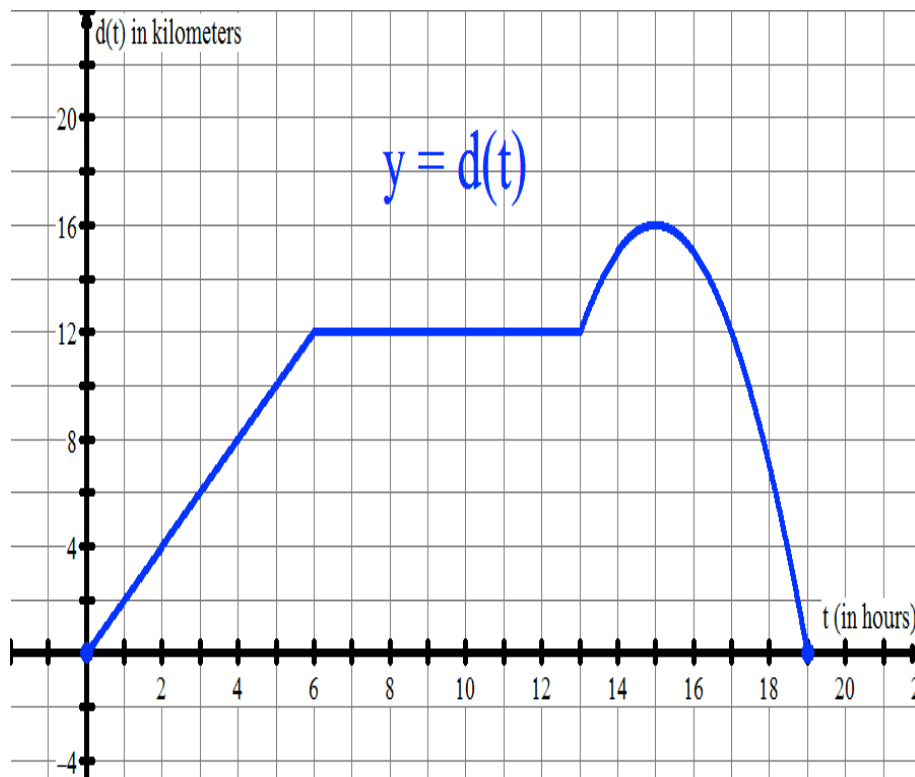
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| <p>86. Identify the domain of f.</p> <p>88. Identify the range of g.</p> <p>90. For what value(s) of x is $f(x) = 5$?</p> <p>92. For what value(s) of x is $g(x) = 0$?</p> <p>94. Find $f(-7)$.</p> | <p>87. Identify the range of f.</p> <p>89. Identify the domain of g.</p> <p>91. For what value(s) of x is $f(x) = -3$?</p> <p>93. For what value(s) of x is $g(x) = 6$?</p> <p>95. Find $g(0)$.</p> |
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60. The graph of $y = K(x)$ is given.
- Find $K(0)$.
 - Find $K(-5)$.
 - Find $K(1)$.
 - For what value(s) of x is $K(x) = 0$?
 - For what value(s) of x is $K(x) = 3$?
 - Write the domain of K .
 - Write the range of K .



H. Application of Functions

Mr. S. went on a two day hiking and camping adventure with his son Alexander. Here is a function $y = d(t)$ which represents a Distance-Time graph for Mr. S's and Alexander's hike. The x axis (the independent variable) is time in hours since we left our campsite and the y-axis represents the distance from our campsite.



- c. Evaluate $d(0)$ and interpret what this point represents.
- d. Evaluate $d(5)$ and interpret what this point represents.
- e. Evaluate $d(15)$ and interpret what this point represents.
- f. For what values of t does $d(t) = 8$? Interpret your answer in the context of the problem.
- g. For what values of t does $d(t) = 12$? Interpret your answer in the context of the problem.
- h. For what values of t does $d(t) = 0$? Interpret your answer in the context of the problem.

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- i. For what values of t does $d(t) \geq 10$? Interpret your answer in the context of the problem.
- j. For what values of t does $d(t) \leq 2$? Interpret your answer in the context of the problem.
- k. What is the domain of the function $y = d(t)$? Interpret your answer in the context of the problem.
- l. What is the range of the function $y = d(t)$? Interpret your answer in the context of the problem.
- m. What is the slope of the function on the interval $0 < t < 6$? Interpret your answer in the context of the problem.
- n. What is the slope of the function on the interval $6 < t < 13$? Interpret your answer in the context of the problem.
- o. What is our average speed in the first 12 hours of our hike?
- p. What is our average speed in the final 6 hours of our hike?
- q. How far did we hike?
- r. Write an equation that represents the first 13 hours of our hike .
- s. Write an equation that represents the complete hiking trip.