



Algebra 1

Topic: Function Notation

Instructions

Solve the following problems. Show all your work and write your answers in complete sentences where appropriate.

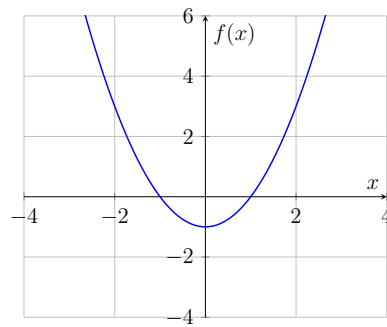
Practice Problems

1. Evaluate the following functions for the given values:
 - i. If $f(x) = 2x + 5$, find $f(3)$.
 - ii. If $g(x) = x^2 - 4x + 1$, find $g(2)$.
 - iii. If $h(x) = \sqrt{x + 4}$, find $h(5)$.
 - iv. If $k(x) = \frac{1}{x}$, find $k(4)$.
2. The table below represents a function $f(x)$. Find $f(0)$, $f(2)$, and $f(4)$. Also, determine whether this function is linear or nonlinear.

x	-2	0	2	4
$f(x)$	-6	0	6	12

3. For the function $f(x) = 3x - 2$, determine:
 - i. $f(0)$
 - ii. $f(-2)$
 - iii. $f(x) = 7$ (find x)
4. Let $f(x) = x^2 - 3x + 4$ and $g(x) = 2x - 5$. Find:

- i. $f(2) + g(2)$
 - ii. $f(-1) - g(-1)$
 - iii. $f(3) \cdot g(3)$
5. The cost of renting a bike is given by the function $C(x) = 10x + 5$, where x is the number of hours. Find:
- i. The cost of renting the bike for 3 hours.
 - ii. The cost of renting the bike for 5 hours.
 - iii. How many hours the bike was rented if the cost was \$55.
6. The graph of $f(x)$ is shown below. Use the graph to determine:
- i. $f(-2)$
 - ii. $f(0)$
 - iii. The value of x when $f(x) = 4$.



Multiple Choice Questions

1. If $f(x) = 2x - 3$, what is $f(4)$?
 - a. 5
 - b. 7
 - c. 1
 - d. 11
2. If $g(x) = x^2 + 3x$, find $g(-2)$.
 - a. -2
 - b. -4
 - c. 4
 - d. -8
3. A function is given as $f(x) = 5x + 2$. If $f(a) = 17$, what is a ?
 - a. 1

b. 2

c. 3

d. 4

4. If $h(x) = \sqrt{x+1}$, what is $h(8)$?

a. 2

b. 3

c. 4

d. 5

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