

Name: _____

Block: _____

Functions and Function Notation

1. What is the domain and range of the following relation?
 $\{(-1,2), (2, 51), (1, 3), (8, 22), (9, 51)\}$

2. What is the domain and range of the following relation?
 $\{(-5,6), (21, -51), (11,93), (81, 202), (19, 51)\}$

3. Create a table of values given the function $f(x) = 3x - 2$ for the domain of $\{-2, -1, 0, 1, 2\}$

x	y

4. Evaluate $f(x) = 5x + 1$ for $f(4)$?

5. Evaluate $g(x) = 4x - 10$ for $g(3)$?

6. Evaluate $f(2) = 3x + 5$

7. Evaluate $f(-3) = 3x + 5$

8. Evaluate $f(4) = 3x + 5$

9. Evaluate $f(-4) = 3x + 5$

10. Evaluate $f(0) = 3x + 5$

11. What is the value of $f(-2)$ for the function $f(x) = x^2 + 2x + 5$?

12. What is the value of $f(-5)$ for the function $f(x) = x^2 + 3x - 10$?

13. What is the value for $f(-6)$ for the function $f(x) = 2x^2 - 3x + 7$?

14. A scuba diver exploring a steep shoreline dives down to a certain depth and returns to the surface. The dive can be modeled by $s(t) = 12t - t^2$.

a. What will the diver's depth be after 8 minutes?

b. After 6 minutes?

c. After 10 minutes?

15. Evaluate the following expressions given the functions below:

$$g(x) = -3x + 1 \quad f(x) = x^2 + 7 \quad h(x) = \frac{12}{x} \quad j(x) = 2x + 9$$

a. $g(10)$

b. $f(3)$

c. $h(-2)$

d. $j(7)$