

Evaluating Functions

Date _____ Period _____

Evaluate each function.

1) $f(a) = a^2 + 3$; Find $f(3)$

2) $w(x) = x^2 - x$; Find $w(-2)$

3) $k(t) = 3|t - 3| + 2$; Find $k(4)$

4) $h(a) = 3a + 2$; Find $h(-2)$

5) $f(x) = -x - 2$; Find $f(1)$

6) $w(a) = |2a + 1|$; Find $w(4)$

7) $w(n) = n^2 - 4$; Find $w(9)$

8) $f(t) = |t|$; Find $f(10)$

9) $g(n) = -4n + 5$; Find $g(-10)$

10) $w(t) = 3|-t| - 2$; Find $w(9)$

11) $f(x) = x^2 + 5x$; Find $f(-x)$

12) $g(x) = -2x^3 + 1$; Find $g(x + 1)$

13) $f(x) = 2x^2 + 5$; Find $f\left(\frac{x}{2}\right)$

14) $f(n) = -3|-3n + 2|$; Find $f(2n)$

15) $p(x) = |x + 3|$; Find $p(-4x)$

16) $g(x) = |x|$; Find $g(-3x)$

17) $k(a) = 2a^2 + 5a$; Find $k\left(\frac{a}{4}\right)$

18) $g(x) = |x - 2| - 1$; Find $g(a - 2)$

19) $h(x) = |x| - 1$; Find $h(-3x)$

20) $f(n) = -2n^2$; Find $f(2n)$

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Evaluate each function.

1) $h(a) = -3a^2 + 3a$; Find $h(a - 1)$

2) $g(x) = x^3$; Find $g(2 + x)$

3) $g(n) = n^2 + 2$; Find $g(3 + y)$

4) $h(x) = x^2 + 5x$; Find $h(x - 2)$

5) $g(n) = n^3 + n^2$; Find $g(-2 + n)$

Algebra 2 Unit #1

Worksheet #8

Function Notation and Evaluating Piecewise Functions

Let:

$$f(x) = 2x - 5$$

$$g(x) = |7 - 3x|$$

$$h(x) = x^2 - 3x + 4$$

$$r(x) = \begin{cases} x^2 & x \leq -3 \\ 5 & -3 < x \leq 4 \\ 2x + 3 & x > 4 \end{cases}$$

Evaluate the following using the functions given above:

1. $f(4)$

2. $g(-3)$

3. $h(2)$

4. $r(-5)$

5. $f(-8)$

6. $h(-5)$

7. $g(0)$

8. $r(-1)$

9. $h(-1)$

10. $r(5)$

11. $r(-1/4)$

12. $f(3/2)$

Evaluate the following using the functions given above. Write your final answer as an ordered pair.

13. $g(5)$

14. $f(-8)$

15. $r(-3)$

16. $h(-3)$

17. $g(7/3)$

18. $r(4)$

Write the following equations using function notation.

19. $y = 3x - 7$

20. $y = -3x^2 - 7x + 4$

Write the following ordered pairs using function notation.

21. $(3, 12)$

22. $(-50, -2000)$

23. $(-0.5, 1.326)$