

Review Worksheet for Unit 2 Quiz

Name \_\_\_\_\_

Date \_\_\_\_\_

Write in function notation.

1.  $y = 5x + 3$  \*change  $y$  to  $f(x)$   
 $f(x) = 5x + 3$

2.  $y = x^2 - 5x + 6$

$f(x) = x^2 - 5x + 6$

Evaluate each function.

3.  $w(x) = 4x + 5$ ; find  $w(-8)$

$w(-8) = -27$

4.  $h(x) = 2x + 5$ ; find  $h(x-3)$

$h(x-3) = 2x - 1$

5.  $m(x) = -3x^2 - 5x$ ; find  $m(3)$

$m(3) = -42$

6.  $f(x) = x^3 - 8$ ; find  $f(2)$

$f(2) = 0$

Evaluate the following expressions given:

$f(x) = 4x - 2$

$g(x) = 3x - 3$

$h(x) = 8x + 10$

7. Find  $x$  if  $f(x) = 2$

$2 = 4x - 2$

$x = 1$

8. Find  $x$  if  $g(x) = 12$

$12 = 3x - 3$

$x = 5$

9.  $f(3) + g(2)$

$f(3) = 10$

$10 + 3 = 13$

$g(2) = 3$

10.  $f(x) + h(x)$

$4x - 2 + 8x + 10$

$12x + 8$

Write the ordered pairs that represent the following expressions.

11.  $f(5) = 9$

$(5, 9)$

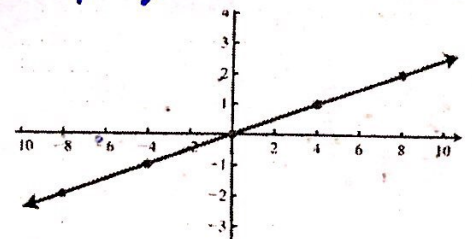
12.  $g(-3) = 7$

$(-3, 7)$

Use the graph to answer the following.

13.  $f(8) = 2$

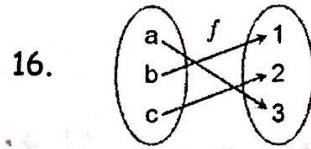
14.  $f(-4) = -1$



Decide whether the following relations are functions. Write yes or no.

15.  $\{(2,5), (-1,4), (2,7), (6,8)\}$

NO

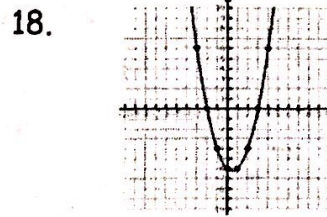


YES

17.

$x$	3	2	1	0	1	2	3
$y$	1	-2	2	4	-3	-2	-1

NO



YES

Evaluate the following expression given:

$$f(x) = 5x^2 - 9x + 2$$

$$h(x) = -2x^2 + 1$$

$$g(x) = x^2 + 3x - 8$$

$$k(x) = 4x - 3$$

19.  $f(x) - g(x)$

20.  $f(x) + g(x)$

21.  $h(x) \cdot k(x)$

$$(5x^2 - 9x + 2) - (x^2 + 3x - 8)$$

$$5x^2 - 9x + 2 + x^2 + 3x - 8$$

$$(-2x^2 + 1)(4x - 3)$$

$$5x^2 - 9x + 2 - x^2 - 3x + 8$$

$$6x^2 - 6x - 6$$

$$-8x^3 + 6x^2 + 4x - 3$$

$$4x^2 - 12x + 10$$

Find the explicit rule for the sequence. Then find  $a_{18}$ .

22. -12, -2, 12, 22, ...  
+10 +14 +10

23. 37, 31, 25, 19, ...  
-6 -6 -6

$$a_n = 37 - 6(n-1)$$

$$37 - 6n + 6$$

$a_n =$  Not Arithmetic  
 $a_{18} =$

$$a_n = -6n + 43$$

$$a_{18} = -65$$

Find the first 4 terms in the sequence given the following information.

24.  $a_1 = 3$   
 $a_n = a_{n-1} - 5$

25.  $a_n = 2n - 8$   
 $a_1 = 2(1) - 8$

$$3, -2, -7, -12$$

$$-6, -4, -2, 0$$