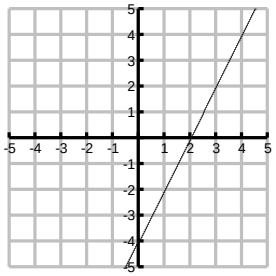
Review Worksheet for the Unit 2C Test

Name_____ Date_____

For each of the functions find the following characteristics.

1.



Domain: _____

Range: _____

x – intercept(s): _____

y – intercept(s): _____

Circle one:

Increasing OR Decreasing

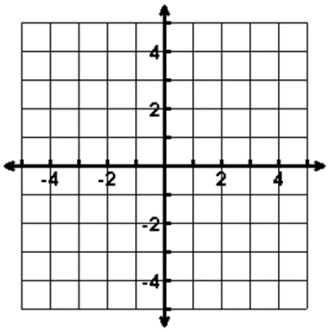
Slope:_____

Equation:_____

End Behavior: As x→ ∞ ,y→_____

As x→ −∞ ,y→_____

2. Graph: y = – ½ x + 2



Domain: _____

Range: _____

x – intercept(s):_____

y – intercept(s): _____

Circle one:

Increasing OR Decreasing

Slope:_____

End Behavior: As x→ ∞ ,y→_____

As x→ −∞ ,y→_____

Function Notation. Find the following using the three given functions.

$f(x) = 2x - 4$ $g(x) = x^3 - 8$ $h(x) = x^2 - 3x$

3. $g(6)$

4. $h(-2)$

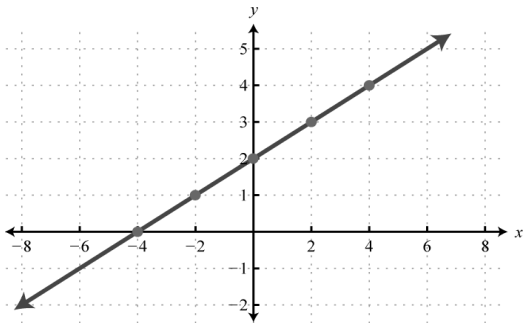
5. $f(5x+6)$

6. $3g(x)$

7. $2h(x) + 4g(x)$

8. $f(x) - h(x)$

Use the graph to answer the following.



9. f(2) = _____ 10. f(4) = _____

11. f(_____) = -1 12. Is this a function?

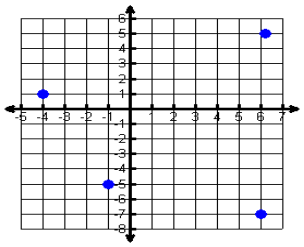
Determine whether the relation is a function. If it is a function, state the domain and range

12. $\{(-3,0),(4,1),(3,2)\}$

13.

Input	Output
-6	-13
-1	-7
4	-2
9	3

14.



Find the rate of change.

15. $(6,-3),(8,-2)$

16. $f(x) = -2x + 4,\ -3 \le x \le 2.$

17. From 2 years to 4 years.

t (Years)	1	2	3	4
f(t)	4	8	10	16

18. $g(x) = 3x - 2$ when $x_1 = 0$ and $x_2 = 4$.

Sequences

19. Use the sequence to answer the following questions: 4.5, 3.3, 2.1, …

A. a_6 = B. Recursive form:

C. Explicit/Closed Formula: D. a_{40} =

20. Use the sequence to answer the following questions:

$$a_1 = 8$$
$$a_n = a_{n-1} + 4$$

A. First 5 terms B. Common difference:

C. Explicit/Closed Form: D. a_{72} =