Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_\_\_\_

**Unit 2 Test Review**

**Properties:**



**Solve the formula for the indicated variable. Show all of your work.**

5. For **r**: V = πrh 6. For **y**: 7x + 14y = -21 7. For **h**: 

**Solve for x for each equation. Show all work.**



8. 9. 10.

**Solve for x for each inequality. Show all work.**



11. 12. 13.

Graph each linear equation. Identify the key characteristics for each.

14. 15.

Slope Intercept Form:

y intercept:

Domain:

Range:

f(3):

f(x) = 4 x =

End Behavior

$x\rightarrow \infty f(x)\rightarrow $\_\_\_\_\_\_\_

$x\rightarrow -\infty f(x)\rightarrow $\_\_\_\_\_\_\_

Slope Intercept Form:

x intercept:

Domain:

Range:

f(3):

f(x) = 4 x =

End Behavior

$x\rightarrow \infty f(x)\rightarrow $\_\_\_\_\_\_\_

$x\rightarrow -\infty f(x)\rightarrow $\_\_\_\_\_\_\_

**Determine if the sequence is arithmetic. If it is, find the common difference.**

16. -3, -23, -43, -63, … 17. 9, 14, 18, 21, …

**Given the explicit formula, find the first 3 terms and the term named in the problem.**

18. 19.

**Given the first term and the common difference, write the explicit or closed form.**

20. 21.

**Given the first term and the common difference, write the recursive formula.**

22. 23.

24. Write an expression to represent the total cost of *x* tickets to a fair discounted 30%.

25. Will is building a sand box for his son to play in. The length is 2 feet more than 4 times the width.

The perimeter is 224 feet. Find the length and width of the sandbox.

26. Sara wants to have an average of at least a 90 on her tests. If she took three tests and earned a

 83, 95, and 88, what is the lowest grade she has to earn on the fourth test?

27. Four consecutive odd integers add up to 352. Write an equation and find the 4 numbers.

Use the two functions given to answer the questions below. $f\left(x\right)=2x^{2}-x+1$ $g\left(x\right)=3x^{2}+3x-4$

28. $f\left(1\right)+g(-2)$ 29. $f\left(x\right)-g(x)$ 30.$ 2f\left(1\right)+3g(-2)$