ALGEBRA I // MODULE 1

SEQUENCES – 1.7

1.7

| READY, SET, GO! | Name | Period | Date |

READY

Find the missing values for each arithmetic or geometric sequence. Underline whether it has a constant difference or a constant ratio. State the value of the constant difference or ratio. Indicate if the sequence is arithmetic or geometric by circling the correct answer.

1. 5, 10, 15, _____, 25, 30, _____, …

   Common difference or ratio?

   Common difference/ratio = _____

   Arithmetic or geometric?

2. 20, 10, _____, 2.5, _____, …

   Common difference or ratio?

   Common difference/ratio = _____

   Arithmetic or geometric?

3. 2, 5, 8, _____, 14, _____, …

   Common difference or ratio?

   Common difference/ratio = _____

   Arithmetic or geometric?

4. 30, 24, _____, 12, 6, …

   Common difference or ratio?

   Common difference/ratio = _____

   Arithmetic or geometric?

SET

Determine whether the given information represents an arithmetic or geometric sequence. Then write the recursive and the explicit equation for each.

5. 2, 4, 6, 8, …
   Arithmetic or geometric?

   Recursive:_____

   Explicit:_____

6. 2, 4, 8, 16, …
   Arithmetic or geometric?

   Recursive:_____

   Explicit:_____

7. Michelle likes chocolate but it causes acne. She chooses to limit herself to three chocolate bars every 5 days. (So, she eats part of a bar each day.)
   Arithmetic or geometric?

   Recursive:_____

   Explicit:_____

8. Scott decides to add running to his exercise routine and runs a total of one mile his first week. He plans to double the number of miles he runs each week.
   Arithmetic or geometric?

   Recursive:_____

   Explicit:_____

ALGEBRA I // MODULE 1

SEQUENCES – 1.7

9. .

Time (in days)	Number of dots
1	3
2	7
3	11
4	15

Arithmetic or geometric?

Recursive:_____

Explicit:_____

10. .

Time (in days)	Number of cells
1	5
2	8
3	12.8
4	20.48

Arithmetic or geometric?

Recursive:_____

Explicit:_____

11. Vanessa has $60 to spend on rides at the state fair. Each ride costs $4. Arithmetic or geometric?

Recursive:_____

Explicit:_____

12. Cami invested $6,000 into an account that earns 10% interest each year. (Hint: Make a table of values to help yourself.) Arithmetic or geometric?
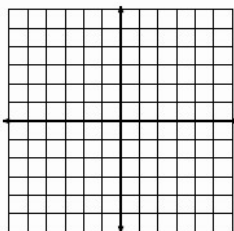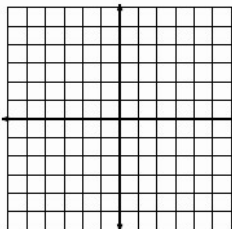
Recursive:_____

Explicit:_____

GO

For the following problems two points and a slope are given. Plot and label the 2 points on the graph. Draw the line segment between them. Then sketch on the graph how you count the slope of the line by moving up or down and then sideways from one point to the other.
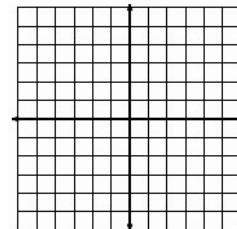
13. $A(2, -1)$ and $B(4, 2)$
Slope: $m = \frac{3}{2}$

14. $H(-2, 1)$ and $K(2, 5)$
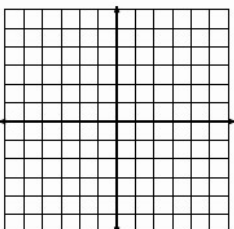Slope: $m = 1$ or $\frac{1}{1}$

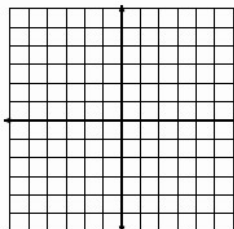15. $P(0, 0)$ and $Q(3, 6)$
Slope: $m = 2$ or $\frac{2}{1}$

For the following problems, two points are given. Plot and label these points on the graph. Then count the slope.

16. $C(-3, 0)$ and $D(0, 5)$
Slope: $m =$

17. $E(-2, -1)$ and $N(-4, 4)$
Slope: $m =$

18. $S(0, 3)$ and $W(1, 6)$
Slope: $m =$