

HOMEWORK: SEQUENCES

NAME: _____

DAY 3 DUE: _____

1 – 4:

Tell whether the following sequences are arithmetic, geometric or neither.

If it is arithmetic, find the common difference, if it is geometric, find the common ratio.

	Sequence	Geometric or Arithmetic	Common Difference or Ratio
1	5, 9, 13, 17, ...		
2	3, 6, 12, 24, ...		
3	40, 10, $\frac{5}{2}$, $\frac{5}{8}$, ...		
4	4, 7, 12, 19, ...		

5 – 8:

Find the next term in the sequence. If it is arithmetic or geometric, write the explicit and recursive formulas.

	Sequence	Explicit Formula	Recursive Formula	10 th Term
5	5, 11, 17, 23, ...			
6	3, 15, 75, 375, ...			
7	$\frac{6}{5}$, $\frac{7}{10}$, $\frac{8}{15}$, $\frac{9}{20}$, ...			
8	1.6, 3.2, 4.8, 6.4, ...			

9 – 14 Given the following information about an ARITHMETIC sequence, write the explicit and recursive formulas.

9. 5, 9, 13, 17, ...	10. $2, \frac{5}{3}, \frac{4}{3}, 1, \dots$
11. $a_{10} = 30; d = \frac{7}{2}$	12. $a_{12} = -3; d = -7$
13. $a_6 = 0; a_{11} = -2$	14. $a_8 = -10; a_{20} = -58$

15 – 20 Given the following information about a GEOMETRIC sequence, write the explicit and recursive formulas..

15. 1, -4, 16, -64, ...	16. 4, 2, 1, 0.5, ...
17. $a_1 = 5; r = 3$	18. $a_4 = 500; r = 5$