Algebra 1 – Unit 2B Assessment Practice Name _____ Date _____ Period ___

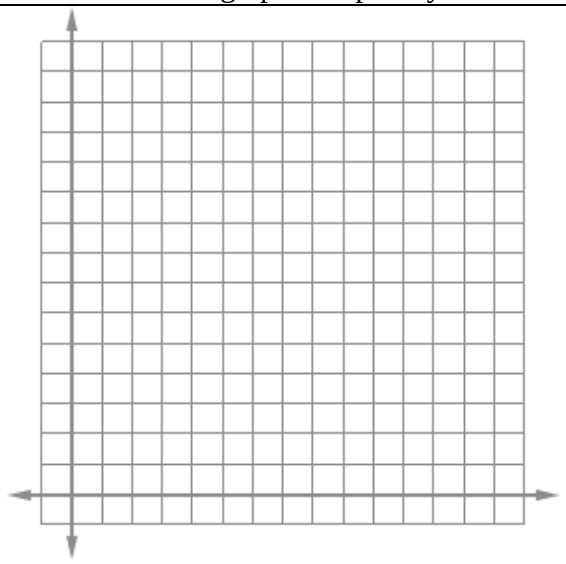
Part A: Identifying Sequences [F-IF.A.3]

	Identify whether the following sequences are arithmetic, geometric, or neither. If arithmetic, **find** the common difference. If geometric, **find** the common ratio.				
1.	$2, 4, -8, -16, \ldots$	2.	$2, 10, 18, 26, \ldots$	3.	$16, 8, 4, 2, \ldots$
	Explain the pattern with words. **Write** or **draw** the next two apparent elements in the sequence.				
4.	$-1, -7, -13, \_\_\_, \_\_\_, \ldots$	5.	$\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}, \_\_\_, \_\_\_, \ldots$	6.	

Part B: Graphing Sequences [F-BF.A.2]

	Using the explicit formula, **graph** the first five terms. **Label** the graph completely.
7.	$f(n) = 4 + 3(n-1), \text{ for } n \geq 1$

n	*f(n)*



Part C: Using Sequences [F-IF.A.2]

	Answer the questions completely.				
8.	$f(n) = f(n-1) + 12; \quad f(1) = -5;$ *Find the* $4th$ *Term.*	9.	$f(n) = n^2 + \frac{1}{2}n + 8;$ *Find* $f(6)$.	10.	*Given* $f(n) = -4n + 11;$ *which term has value of* -153?

Part D: Writing Sequences [F-BF.A.2]

	Answer the questions completely.
11.	A group of people were to line up in rows inside of a football stadium. The first row started with 5 people. Every row after that had 4 more individuals. **Write** a recursive rule to describe this situation. **Write** an explicit rule to describe this situation. **Find** the number of people that are lined up in the 25th row.
12.	A new breed of rabbits triples in population every month. If the population starts with 2 rabbits, the explicit geometric formula would be $f(n) = 2(3)^{n-1}$, where $n =$ number of months. **Translate** the formula into a recursive version of the formula. (Do not forget to identify the first term.)

Part E: Essential Question

	Write a Big Idea response for the Essential Question. **Include** vocabulary terms you have learned. Your responses will be evaluated using the Big Ideas Scoring Guide.
13.	**Give** a situation where the explicit formula of a sequence is more useful than the recursive formula.