

Name: _____

Practice Assignment

Block: _____

For the following questions, determine if the sequence is arithmetic or geometric. Then write BOTH an explicit and recursive rule. You must also show the simplified version of the explicit rule (arithmetic only).

1. -10, -4, 2, 8, 14, ...

Type: _____

Recursive Rule: _____

Explicit Rule: _____

Simplified Explicit Rule: _____

2. 1, -2, 4, -8, ...

Type: _____

Recursive Rule: _____

Explicit Rule: _____

Simplified Explicit Rule: _____

3. 36, 31, 26, 21, ...

Type: _____

Recursive Rule: _____

Explicit Rule: _____

Simplified Explicit Rule: _____

4. 36, 18, 9, 4.5,

Type: _____

Recursive Rule: _____

Explicit Rule: _____

Simplified Explicit Rule: _____

5. 4, 12, 36, 108, ...

Type: _____

Recursive Rule: _____

Explicit Rule: _____

Simplified Explicit Rule: _____

6. 34, 24, 14, 4,

Type: _____

Recursive Rule: _____

Explicit Rule: _____

Simplified Explicit Rule: _____

For each of the following formulas, generate the first five terms:

7.
 $a_1 = 13$
 $a_n = a_{n-1} + 12$

8.
 $a_1 = -4$
 $a_n = a_{n-1} \cdot -3$

9.
 $a_1 = -4$
 $a_n = a_{n-1} + 12$

13.
 $a_1 = -3$
 $a_n = a_{n-1} \cdot 4$

14.
 $a_1 = 45$
 $a_n = a_{n-1} - 10$

15.
 $a_1 = 1024$
 $a_n = a_{n-1} \cdot \frac{1}{2}$

16. For the given information, use it to create an explicit rule.

a. Arithmetic: $a_5 = 15$ and $a_6 = 22$

b. Geometric: $a_3 = 48$ and $a_4 = 192$

c. Arithmetic: $a_5 = -18$ and $a_6 = -28$

d. Geometric: $a_4 = 250$ and $a_5 = 1250$