

Self Check #16, Recursive & Explicit Sequences Date _____ Period _____

Given the first four numbers in each arithmetic sequence write a recursive and explicit formula:

1. 7, 15, 23, 31

2. 1, -5, -11, -17

Recursive

Recursive

Explicit

Explicit

Given the first four numbers in each geometric sequence write a recursive and explicit formula:

3. 81, 27, 9, 3

4. -5, -30, -180, -1080

Recursive:

Recursive:

Explicit:

Explicit:

Use the pattern of the following arithmetic sequence figures write a recursive and explicit formula:

Stage 0

Stage 1

Stage 2



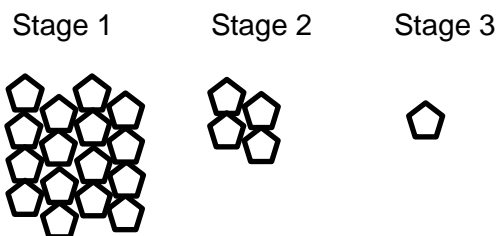
5. Explicit Rule:

Recursive Rule:

6. How many stars will there be in the 8th stage? 12th stage?

7. What stage is the figure with 61 stars?

Use the pattern of the following geometric sequence figures write a recursive and explicit formula:



8. Explicit Rule: Recursive Rule:

9. What is the 5th term in the sequence?

10. What term in the sequence is 64?

Find the next four terms in each of the following sequences.

11. $f(0) = 3, \quad f(x + 1) = f(x) + 5$

12. $f(0) = 2, \quad f(x + 1) = f(x) \cdot 3$

13. $f(x) = 5 \cdot 2^x$

14. $f(x) = -6 + x \cdot 5$