Recursive and Explicit Rules (Formula) Assignment

Write the recursive and explicit formulas for the sequences.

1.   108, 36, 12, 4, …   Recursive: Explicit:

2.   -12.3, -9.7, -7.1, -4.5, …   Recursive: Explicit:

3. $\frac{1}{3}, \frac{2}{9}, \frac{4}{27}, \frac{8}{81}, \dots$ Recursive: Explicit:

4. $-\frac{1}{2}, 0, \frac{1}{2}, 1, \dots$ Recursive: Explicit:

5.   ____, ____, 6, 9, 12, …   Recursive: Explicit:

6.   Jade is training for a matharon. During her first week of training, each run she takes her 90 minutes to complete. She increases the length of each run (measured in minutes) by 10% each week.

   Recursive: Explicit:

7.   You have read twenty-five pages of a book. You plan to read an additional ten pages each night.
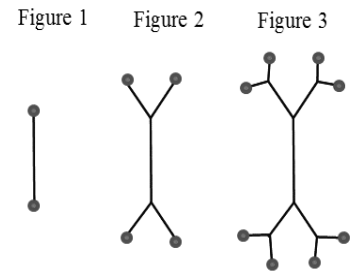
   Recursive: Explicit:

8.   You are going on vacation. You have $105 to bring with you. You expect to spend $15 each day.
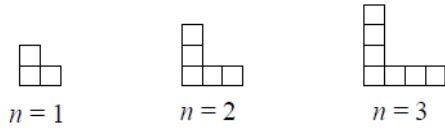
   Recursive: Explicit:

9. The sequence is based on the *number of dots* in each figure to the right.

Recursive: Explicit:

Figure 1   Figure 2   Figure 3

10. The sequence is based on the *number of squares* in each figure below.

$n = 1$ $n = 2$ $n = 3$

Recursive: Explicit:

11. A sequence that has a 7th term of 9 and a common difference of -2.

Recursive: Explicit:

12. A sequence that has a 99th term of 58 and a common ratio of $\frac{3}{4}$.

Recursive: Explicit:

13. A sequence that has a 5th term of 17 and a common difference of 3.

Recursive: Explicit:

12. A sequence that has a 10th term of 20 and a common ratio of 2.

Recursive: Explicit: