Recursive and Explicit Equations of Sequences

Find the following information about each sequence below, and then write the recursive and explicit equations:

1. $12, 17, 22, 27, \ldots$

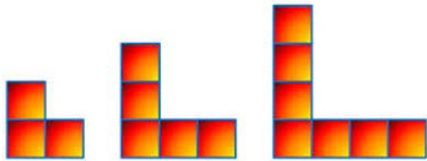   Initial Term: _____   Common Difference: _____

    Recursive: _____   Explicit: _____

2. $\frac{1}{2}, 1, 2, 4, \ldots$

    Initial Term: _____   Common Ratio: _____

    Recursive: _____   Explicit: _____

3. The sequence is the number of blocks below

    Initial Term: _____   Common Difference: _____

    Recursive: _____   Explicit: _____

Recursive and Explicit Equations of Sequences (solutions)

Find the following information about each sequence below, and then write the recursive and explicit equations:

1. $12, 17, 22, 27, \ldots$

   Initial Term: 12   Common Difference: 5
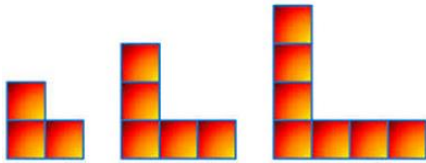
   Recursive: $a_{n+1} = a_n + 5, a_1 = 12$ Explicit: $a_n = 5n + 7$

2. $\frac{1}{2}, 1, 2, 4, \ldots$

   Initial Term: $\frac{1}{2}$ Common Ratio: 2

   Recursive: $a_{n+1} = a_n * 2, a_1 = \frac{1}{2}$ Explicit: $a_n = \frac{1}{2}(2)^{n-1}$

3.   The sequence is the number of blocks below

   Initial Term: 3   Common Difference: 2

   Recursive: $a_{n+1} = a_n + 2, a_1 = 3$ Explicit: $a_n = 2n + 1$