

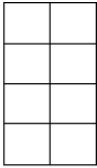
12.4 Recursive and Explicit Formulas

For Problems 1-4, list the first five terms of each sequence.


<p>1) $a_n = a_{n-1} + 6$, where $a_1 = 11$ for $n \geq 1$</p>	<p>2) $a_n = a_{n-1} \div 2$, where $a_1 = 50$ for $n \geq 1$</p>
<p>3) $a_n = 2 * a_{n-1} + 8$, where $a_1 = 1$ for $n \geq 1$</p>	<p>4) $a_n = 5 * a_{n-1} - 3$, where $a_1 = 2$ for $n \geq 1$</p>

For Problems 5-7, write a recursive formula for each sequence given or described below.

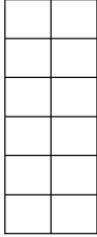
5)



$n = 1$




$n = 2$

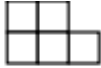


$n = 3$


6)




$n = 1$



$n = 2$




$n = 3$




$n = 4$


7)




$n = 1$



$n = 2$



$n = 3$



$n = 4$

For the problems below, identify if they are arithmetic or geometric, then write an explicit formula for the pattern given.

Recall:

Arithmetic	$a_n = a_0 + dn$ $d = \text{common difference}$
Geometric	$a_n = a_0(r)^{n-1}$ $r = \text{common ratio}$

8) The sequence 18, 25, 32, 39, ...

9) The sequence -7, -10.5, -15.75, -23.625, ...

10) The sequence 9, 14, 19, 24, ...

11) The sequence -30, -90, -180, -540, ...

12) The sequence -3, -23, -43, -63, ...

13) The sequence 35, 7, 1.4, .28, ...

14) The sequence 5, 12, 19, 26, ...