



## 6-4 Additional Practice

### Geometric Sequences

Is the sequence a geometric sequence? If it is, give the common ratio.

1. 1, 49, 98, 147, ...

2. 4, 12, 36, 108, ...

3. 16, 12, 9,  $\frac{27}{4}$ , ...

Write a recursive formula and an explicit formula for each geometric sequence.

4. 9, 18, 36, 72, ...

5. 540, 180, 60, 20, ...

Recursive:

Recursive:

Explicit:

Explicit:

Write a recursive formula for each explicit formula.

6.  $a_n = -4 \cdot 3^{n-1}$

7.  $a_n = 5 \cdot \left(\frac{2}{3}\right)^{n-1}$

Write an explicit formula for each recursive formula.

8.  $a_1 = 50$

$a_n = 0.5a_{n-1}$

9.  $a_1 = 2$

$a_n = 6a_{n-1}$

10. How are geometric sequences and exponential functions alike?

How are they different?

11. The number of subscribers for an online periodical doubles each month.

The first month of publication, there were only 100 subscribers. How many subscribers will there be in one year?