



6-4 Reteach to Build Understanding

Geometric Sequences

1. Use words to label the parts of the formulas for the geometric sequences shown. Some have been done for you.

Explicit formula

Recursive formula

$$a_n = a_1(r)^{n-1}$$

Initial condition: $a_1 =$ _____

$$a_n = r \cdot a_{(n-1)}$$

first term

previous term

2. Gina incorrectly wrote the explicit formula for the geometric sequence 27, 36, 48, 64, $85\frac{1}{3}$, ... Find and correct her error.

The first term is 27. The common ratio is $\frac{3}{4}$.

$$a_n = a_1(r)^{n-1} \qquad a_n = 27\left(\frac{3}{4}\right)^{n-1}$$

The explicit formula is $a_n = 27\left(\frac{3}{4}\right)^{n-1}$.

3. Write the explicit formula for the geometric sequence 1.12, 2.8, 7, 17.5, 43.75, ... Then find the value of the 7th term.

$$\frac{2.8}{1.12} = \frac{7}{2.8} = \frac{7}{7} = \frac{17.5}{7} = \dots$$

Find the common ratio.

The first term is _____.

Identify the first term.

$$a_n = \frac{(-)^{n-1}}{}$$

Substitute the values for a_1 and r .

$$a_7 = \frac{(-)^{7-1}}{}$$

Find the 7th term.

$$a_7 = \frac{(-)^{7-1}}{}$$

Simplify.

The 7th term in this geometric sequence is _____.