

Practice Worksheet

Geometric Sequences and Series

Solve.

1. The first term of a geometric sequence is -4 , and the common ratio is $\frac{3}{4}$. Find the next four terms.
2. The first term of a geometric sequence is 12 , and the common ratio is $-\frac{3}{2}$. Find the next four terms.
3. Find the ninth term of the geometric sequence $\sqrt{3}, -3, 3\sqrt{3}, \dots$.
4. Find the fifth term of the geometric sequence $20, 0.2, 0.002, \dots$.
5. Find the first term of the geometric sequence for which $a_5 = 64\sqrt{2}$ and $r = \sqrt{2}$.
6. Find the first three terms of the geometric sequence for which $a_4 = 8.4$ and $r = 4$.
7. Form a sequence that has one geometric mean between $\frac{1}{9}$ and 3 .
8. Find the sum of the first eight terms of the series $\frac{3}{4} + \frac{9}{20} + \frac{27}{100} + \dots$.