

Sequences & Series SS3: Geometric Sequences

What are the next 3 terms in the sequence and find the common ratio for the sequence:

1. 3, 9, 27, _____, _____, _____ Common ratio =

2. 5, 1, 1/5, _____, _____, _____ Common ratio =

3. -1, 7, -49, _____, _____, _____ Common ratio =

Write the first four terms of the given sequence:

4. $a_n = 3 \cdot 2^{n-1}$

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

Write the explicit formula for the given sequences:

6. 3, 6, 12, ...

7. $\frac{1}{9}, \frac{1}{3}, 1, \dots$

8. -6, 24, -96, ...

Find the given term of the geometric sequence.

9. $a_1 = 6, r = 2, n = 5$

10. $a_1 = 5, r = -0.5, n = 13$

11. $a_1 = 0.2, r = 4, n = 124$

The given number is which number in the given sequence?

12. 16384, $a_n = 4(2)^{n-1}$

13. 98415, $a_n = 5(3)^{n-1}$