

Quiz - Geometric Series & Sequence #2

You must show your work to receive credit.Determine whether each sequence is geometric. If so, identify the common ratio, r .

1. 4, -12, 36, -108, ...

2. 128, 96, 72, 54, ...

3. Write an explicit formula for the geometric sequence 16, 24, 36, 54, ...

4. Find the 10th term of the sequence $t_1 = 0.25$; $t_n = 4t_{n-1}$.

5. Find the two geometric means between 64 and 125.

6. Find the sum of the first 15 terms of the series $1 + (-2) + 4 + (-8) + \dots$ 7. Find S_7 of the geometric series $16 + 24 + 36 + 54 + \dots$ 8. Identify t_1 , n , and r . Then evaluate. $\sum_{m=1}^7 4 \cdot 2^m$

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Find the sum of each infinite geometric series, if it exists.

9. $60 + 84 + 117.6 + 164.64 + \dots$

10. $\sum_{m=1}^{\infty} 0.45^{m-1}$

11. Write as a fraction in simplest form. $\overline{0.225}$

12. Write an infinite geometric series that converges to the number $0.1515151515\dots$