

Name _____ Period _____

11-4 to 11-7 Tgxlgy 'Rt qdigo u

1. Write the first five terms of the geometric sequence using the given explicit formula.

$$t_n = 4 \cdot \frac{1}{4}^n$$

- [A] $1, \frac{1}{4}, \frac{1}{16}, \frac{1}{64}, \frac{1}{256}$ [B] $4, 1, \frac{1}{4}, \frac{1}{16}, \frac{1}{64}$ [C] $4, 1, \frac{4}{5}, \frac{2}{3}, \frac{4}{7}$ [D] $4, \frac{5}{4}, \frac{3}{4}, \frac{7}{12}, \frac{1}{2}$

[1] _____

2. Write an explicit formula for the n th term of the geometric sequence.

$$\frac{8}{3}, \frac{32}{9}, \frac{128}{27}, \frac{512}{81}, \dots$$

- [A] $t_n = \frac{8}{3} \cdot \frac{4}{3}^{n-1}$ [B] $t_n = \frac{1}{2} \cdot 2^n$ [C] $t_n = \frac{8}{3} \cdot \frac{4}{3}^{n+1}$ [D] $t_n = \frac{8}{3} \cdot 2^{n-1}$

[2] _____

3. Find the two geometric means between 2 and 54.

- [A] 6, 18 [B] 8, 32 [C] 6, 12 [D] 4, 8

[3] _____

4. Find the three *positive* geometric means between 3 and $\frac{48}{625}$.

[A] $\frac{9}{5}, \frac{27}{25}, \frac{81}{125}$

[B] $1, \frac{1}{3}, \frac{1}{9}$

[C] $\frac{6}{5}, \frac{12}{25}, \frac{24}{125}$

[D] $\frac{3}{5}, \frac{3}{25}, \frac{3}{125}$

[4] _____

5. Find the sum of the geometric series $0.7 + 0.07 + 0.007 + \dots$ given the formula $S = \frac{a}{1-r}$, where a is the first term, r is the common ratio, and S is the sum.

[A] 0.777

[B] 0.021

[C] $\frac{7}{10}$

[D] $\frac{7}{9}$

[5] _____

6. Find the sum of the first 5 terms of the geometric series $4 + \frac{16}{5} + \frac{64}{25} + \frac{256}{125} + \dots$

[A] 17.28

[B] 6.27

[C] 242.51

[D] 13.45

[6] _____

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7. $\sum_{n=1}^6 6(2)^{n-1}$

[7] _____