NAME:

CLASS:

GEOMETRIC PROGRESSION

1 Given GS $\frac{1}{3},\frac{1}{9},\frac{1}{27},\ldots$ which term of GS is $\frac{1}{19683}$.

A. $n=5$ B. $n=7$ C. $n=8$ D. $n=9$

Write your answer here:

2 The first term of GS is 1. The sum of the third and fifth terms is 90. Find the possible values of the common ratio of the GS.

A. $r=\pm 2$ B. $r=\pm 3$ C. $r=\pm 4$ D. $r=\pm 5$

Write your answer here:

3 The sum of the first three terms of GS is 16 and the sum of the next three terms is 128. Determine the first term and the common ratio.

A. $r=2, a=4$ B. $r=3, a=7$ C. $r=2, a=\frac{16}{7}$ D. $r=3, a=\frac{13}{7}$

Write your answer here:

4 Find the sum of the following GS $5+25+125+\ldots+15625$.

A. 1953 B. 19530 C. 15390 D. 15390

Write your answer here:

5 In a GS, the sum of the first 4 terms is $\frac{85}{8}$ and the sum of the first eight terms is $\frac{21845}{2048}$.

Find the sum to infinity.

A. $\frac{32}{3}$ B. $\frac{34}{3}$ C. 16 D. $\frac{37}{3}$

Write your answer here:

6 Find the third term of GS is $\frac{2}{3}$ and the sixth term is $\frac{2}{81}$. Find the sum to infinity.

A. $S_\infty = 9$ B. $S_\infty = 10$ C. $S_\infty = 6$ D. $S_\infty = 7$

Write your answer here:

7 A GS is given by $3+3(0.8)+3(0.8^2)+\ldots$ Find $\frac{S_6}{S_4}$.

A. $\frac{1280}{1023}$ B. $\frac{1281}{1025}$ C. $\frac{1270}{1023}$ D. $\frac{1480}{1025}$

Write your answer here:

8 From question 7, find the smallest integer n such that $S_\infty - S_n < \frac{1}{2}$.

A. $n=12$ B. $n=14$ C. $n=16$ D. $n=18$

Write your answer here:

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