

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Finite Geometric Series

Evaluate each geometric series, then determine the number of terms in the final section.

1. Find the sum of each displayed geometric list.

1. Add these 4 terms: 5, -10, 20, -40

Answer: _____

2. Add these 5 terms: 2.2, 6.6, 19.8, 59.4, 178.2

Answer: _____

3. Add these 4 terms: 1.3, 2.6, 5.2, 10.4

Answer: _____

4. Add these 5 terms: 2, -8, 32, -128, 512

Answer: _____

2. Evaluate each geometric sigma expression.

5.
$$\sum_{n=1}^6 4.6 \cdot 4^{n-1}$$

Answer: _____

6.
$$\sum_{n=1}^6 2 \cdot 2^{n-1}$$

Answer: _____

7.
$$\sum_{n=1}^6 1.7 \cdot (-3)^{n-1}$$

Answer: _____

8.
$$\sum_{n=1}^5 5 \cdot (-4)^{n-1}$$

Answer: _____

3. Find the number of terms, N.

9. $a_1 = 2.3$ $a_N = 1676.7$ $S_N = 2513.9$

Answer: _____

10. $a_1 = 1.5$ $a_N = 40.5$ $S_N = 60.0$

Answer: _____

11. $a_1 = 2$ $a_N = 8$ $S_N = 14$

Answer: _____

12. $a_1 = 4$ $a_N = 64$ $S_N = 84$

Answer: _____