

Geometric Series Practice

Find each indicated sum of the geometric series $1 + 2 + 4 + 8 + \dots$

1.) S_3

2.) S_5

3.) S_{11}

4.) Does this series converge or diverge?

Find each indicated sum of the geometric series $2 + (-6) + 18 + (-54) \dots$

5.) S_4

6.) S_{13}

7.) S_{20}

8.) Does this series converge or diverge?

Find each indicated sum of the geometric series $12 + 3 + \frac{3}{4} + \frac{3}{16} + \dots$

9.) S_5

10.) S_{10}

11.) S_{20}

12.) Find the sum of the infinite series from above.

13.) Given $t_1 = 5$ and $r = -5$ find S_4 .

14.) Given $t_1 = 3$ and $r = \frac{1}{3}$, find S_6 . Then find the sum of the infinite series.