

11.6 Infinite Geometric Series

put formula here:

For the infinite series, find the sum. If the series has no sum, then say so.

1. $24 - 12 + 6 - 3 + \dots$

2. $24 + 12 + 6 + 3 + \dots$

3. $27 - 18 + 12 - 8 + \dots$

4. $256 + 320 + 400 + 500 + \dots$

5. $2 + 4 + 8 + 16 + \dots$

6. $500 + 400 + 320 + 256 + \dots$

7. $\sum_{n=1}^{\infty} \left(\frac{2}{5}\right)^n$

8. $\sum_{n=0}^{\infty} \left(\frac{1}{4}\right)^n$

Write each repeating decimal as a common fraction.

9. $0.333333\dots$

10. $0.444444\dots$

11. $0.12121212\dots$

12. $0.363636\dots$

13. $0.123123\dots$

14. $0.456456\dots$

15. $2.030303\dots$

16. $1.045045\dots$