

Exercises

Find the sum of each finite series.

1. $\sum_{n=1}^3 (n - 4)$

2. $\sum_{n=1}^4 \frac{1}{3}n$

3. $\sum_{n=3}^8 (3n - 1)$

4. $\sum_{n=3}^8 \frac{2n}{3}$

5. $\sum_{n=3}^9 (4 - 2n)$

6. $\sum_{n=1}^5 8n$

7. $\sum_{n=2}^7 4n$

8. $\sum_{n=1}^7 (3 - 2n)$

Exercises

Evaluate the finite series for the specified number of terms.

1. $3 + 12 + 48 + 192 + \dots; n = 6$

2. $8 + 2 + \frac{1}{2} + \frac{1}{8} + \dots; n = 5$

3. $-10 - 5 - 2.5 - 1.25 - \dots; n = 7$

4. $10 + (-5) + \frac{5}{2} + \left(-\frac{5}{4}\right) + \dots; n = 11$

Evaluate each infinite geometric series.

5. $10 + 5 + 2.5 + \dots$

6. $-1 + \frac{2}{11} - \frac{4}{121} + \dots$

7. $\frac{1}{4} + \frac{7}{32} + \frac{49}{256} + \dots$

8. $\frac{1}{2} - \frac{1}{5} + \frac{2}{25} - \dots$

9. $-\frac{1}{6} + \frac{1}{12} - \frac{1}{24} + \dots$

10. $20 + 16 + \frac{64}{5} + \dots$

11. $12 + 4 + \frac{4}{3} + \dots$

12. $\frac{1}{4} - \frac{1}{8} + \frac{1}{16} - \dots$

13. $\frac{2}{3} + \frac{2}{15} + \frac{2}{75} + \dots$