

Sequence

Write the first four terms of the sequence whose n th term is given by the formula

1. $a_n = 1 + 2n$

2. $a_n = 2^{n-1}$

3. $a_n = (-1)^n n$

Find the indicated term of the sequence whose n th term is given by the formula

4. $a_n = n(n + 1)$; a_{12}

5. $a_n = (n + 3)(n + 1)$; a_6

6. $a_n = \frac{(-2)^{n+1}}{n+1}$; a_7

Summation notation: ex $\sum_{j=1}^4 2j$

Write the series in expanded form then find the sum of the series

7. $\sum_{n=1}^6 (n + 3)$

8. $\sum_{i=1}^4 (2i - 3)^2$

$$9. \quad \sum_{i=3}^6 \frac{1-i}{i}$$

$$10. \quad \sum_{n=0}^3 3^n$$

Write the series in expanded form.

$$11. \quad \sum_{n=1}^5 3x^n$$

$$12. \quad \sum_{i=1}^4 \frac{x^i}{3i}$$

$$13. \quad \sum_{n=1}^4 nx^{n+1}$$

$$14. \quad \sum_{n=1}^4 (3n) x^n$$