

Progression of Differences

Exercise 1

1. Find the general term of $4, -3, -2, 13, 48, 109, 202, \dots$.
 2. Find the general term of $5, 10, 27, 65, 133, 240, 395, \dots$.
 3. Find the general term of $5, 6, 3, -7, -27, -60, -109, \dots$.
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Answers to Exercise 1

(1) $n^3 - 2n^2 - 8n + 13.$

(2) $\frac{3n^3}{2} - 3n^2 + \frac{7n}{2} + 3.$

(3) $-\frac{n^3}{2} + n^2 + \frac{3n}{2} + 3.$