

Σの公式とΣの計算全パターン。Σの考え方のすべて 解答

$$\sum_{k=1}^n (3k^2 + k - 4)$$

解答

$$\begin{aligned}\sum_{k=1}^n (3k^2 + k - 4) &= 3 \cdot \frac{1}{6}n(n+1)(2n+1) + \frac{1}{2}n(n+1) - 4n \\ &= \frac{1}{2}n\{(n+1)(2n+1) + (n+1) - 8\} \\ &= \frac{1}{2}n(2n^2 + 4n - 6) \\ &= n(n^2 + 2n - 3) \\ &= \mathbf{n(n-1)(n+3)} \quad \dots \text{ (答)}\end{aligned}$$