



基本問題を確認しよう

数

不定積分 (解答)

① (1) $\int x^2 dx = \frac{1}{3}x^3 + C$ (C は積分定数)

(2) $\int x^5 dx = \frac{1}{6}x^6 + C$ (C は積分定数)

(3) $\int (x^3 - 3x^2 + 5x - 4) dx = \frac{1}{4}x^4 - x^3 + \frac{5}{2}x^2 - 4x + C$ (C は積分定数)

(4) $\int (t-3)(2t+1) dt = \int (2t^2 - 5t - 3) dt = \frac{2}{3}t^3 - \frac{5}{2}t^2 - 3t + C$ (C は積分定数)

② $f'(x) = 2x - 1$ より, $f(x) = \int (2x - 1) dx = x^2 - x + C$ (C は積分定数)

$f(-3) = 5$ より, $(-3)^2 - (-3) + C = 5 \quad \therefore C = -7$

よって, $f(x) = x^2 - x - 7$