

# 多項式の計算 (乗法公式①) No.4

**乗法公式 ①**  $(x + a)(x + b) = x^2 + (a + b)x + ab$

1. 次の式を展開しなさい。

例  $(x + 2)(x + 6) = x^2 + (2 + 6)x + 2 \times 6 = x^2 + 8x + 12$

①  $(x + 2)(x + 8)$       ②  $(x + 5)(x + 2)$       ③  $(x + 4)(x - 3)$

④  $(x - 5)(x + 1)$       ⑤  $(x - 6)(x - 2)$       ⑥  $(x + 7)(x - 3)$

⑦  $(x + 3)(x + 2)$       ⑧  $(x - 1)(x - 3)$       ⑨  $(x + 8)(x - 2)$

<答え>

①  $(x + 2)(x + 8) = x^2 + (2 + 8)x + 2 \times 8 = x^2 + 10x + 16$       ②  $(x + 5)(x + 2) = x^2 + (5 + 2)x + 5 \times 2 = x^2 + 7x + 10$       ③  $(x + 4)(x - 3) = x^2 + (4 - 3)x + 4 \times (-3) = x^2 + x - 12$

④  $(x - 5)(x + 1) = x^2 + (-5 + 1)x + (-5) \times 1 = x^2 - 4x - 5$       ⑤  $(x - 6)(x - 2) = x^2 + (-6 - 2)x - 6 \times (-2) = x^2 - 8x + 12$

⑥  $(x + 7)(x - 3) = x^2 + (7 - 3)x + 7 \times (-3) = x^2 + 4x - 21$       ⑦  $(x + 3)(x + 2) = x^2 + (3 + 2)x + 3 \times 2 = x^2 + 5x + 6$

⑧  $(x - 1)(x - 3) = x^2 + (-1 - 3)x - 1 \times (-3) = x^2 - 4x + 3$       ⑨  $(x + 8)(x - 2) = x^2 + (8 - 2)x + 8 \times (-2) = x^2 + 6x - 16$