

<多項式の乗法2>

$$(a+b)(c+d+e) = ac + ad + ae + bc + bd + be$$

問1 次の式を展開しなさい。

$$\begin{aligned} \textcircled{1} \quad & (a-2)(a+2b-3) \\ & = a^2 + 2ab - 3a - 2a - 4b + 6 \\ & = a^2 + 2ab - 5a - 4b + 6 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (x-2y-5)(x-2) \\ & = x^2 - 2x - 2xy + 4y - 5x + 10 \\ & = x^2 - 2xy - 7x + 4y + 10 \end{aligned}$$

問2 次の式を展開しなさい。

$$\begin{aligned} \textcircled{1} \quad & (x+6)(y+2) \\ & = xy + 2x + 6y + 12 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (a-3)(b+2) \\ & = ab + 2a - 3b - 6 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & (a-b)(c-d) \\ & = ac - ad - bc + bd \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & (2x+1)(y-7) \\ & = 2xy - 14x + y - 7 \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & (x+2)(x+4) \\ & = x^2 + 4x + 2x + 8 \\ & = x^2 + 6x + 8 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & (x-2)(x-3) \\ & = x^2 - 3x - 2x + 6 \\ & = x^2 - 5x + 6 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & (2a+b)(a+3b) \\ & = 2a^2 + 6ab + ab + 3b^2 \\ & = 2a^2 + 7ab + 3b^2 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & (2a-b)(3a+4b) \\ & = 6a^2 + 8ab - 3ab - 4b^2 \\ & = 6a^2 + 5ab - 4b^2 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & (a+1)(a-b+2) \\ & = a^2 - ab + 2a + a - b + 2 \\ & = a^2 - ab + 3a - b + 2 \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & (2x+y-1)(6x-3y) \\ & = 12x^2 - 6xy + 6xy - 3y^2 - 6x + 3y \\ & = 12x^2 - 3y^2 - 6x + 3y \end{aligned}$$