

1 次の式を展開しなさい。

① $(x+6)(y+4)$

② $(x+8)(y-2)$

③ $(3x+2y)(x+5y)$

④ $(4x-y)(3x+2y)$

2 次の式を展開しなさい。

① $(x+y)(3x+5y-2)$

② $(2x-y)(2x-4y+5)$

③ $(3x+4y-2)(x+5y)$

④ $(5x-3y+7)(4x-3y)$

1 次の式を展開しなさい。

$$\begin{aligned} \textcircled{1} \quad & (x+6)(y+4) \\ & = x \times y + x \times 4 + 6 \times y + 6 \times 4 \\ & = xy + 4x + 6y + 24 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (x+8)(y-2) \\ & = x \times y + x \times (-2) + 8 \times y + 8 \times (-2) \\ & = xy - 2x + 8y - 16 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & (3x+2y)(x+5y) \\ & = 3x \times x + 3x \times 5y + 2y \times x + 2y \times 5y \\ & = 3x^2 + 15xy + 2xy + 10y^2 \\ & = 3x^2 + 17xy + 10y^2 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & (4x-y)(3x+2y) \\ & = 4x \times 3x + 4x \times 2y - y \times 3x - y \times 2y \\ & = 12x^2 + 8xy - 3xy - 2y^2 \\ & = 12x^2 + 5xy - 2y^2 \end{aligned}$$

2 次の式を展開しなさい。

$$\begin{aligned} \textcircled{1} \quad & (x+y)(3x+5y-2) \\ & = x \times 3x + x \times 5y + x \times (-2) + y \times 3x + y \times 5y + y \times (-2) \\ & = 3x^2 + 5xy - 2x + 3xy + 5y^2 - 2y \\ & = 3x^2 + 8xy + 5y^2 - 2x - 2y \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (2x-y)(2x-4y+5) \\ & = 2x \times 2x + 2x \times (-4y) + 2x \times 5 - y \times 2x - y \times (-4y) - y \times 5 \\ & = 4x^2 - 8xy + 10x - 2xy + 4y^2 - 5y \\ & = 4x^2 - 10xy + 4y^2 + 10x - 5y \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & (3x+4y-2)(x+5y) \\ & = 3x \times x + 3x \times 5y + 4y \times x + 4y \times 5y - 2 \times x - 2 \times 5y \\ & = 3x^2 + 15xy + 4xy + 20y^2 - 2x - 10y \\ & = 3x^2 + 19xy + 20y^2 - 2x - 10y \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & (5x-3y+7)(4x-3y) \\ & = 5x \times 4x + 5x \times (-3y) - 3y \times 4x - 3y \times (-3y) + 7 \times 4x + 7 \times (-3y) \\ & = 20x^2 - 15xy - 12xy + 9y^2 + 28x - 21y \\ & = 20x^2 - 27xy + 9y^2 + 28x - 21y \end{aligned}$$