

5. 多項式の因数分解②

$$(1) (x+6)(x-4) \quad (2) (x-8)(x+3) \quad (3) (x-12)(x+2) \quad (4) (x+24)(x-1)$$

$$(5) (x-2y)(x-12y) \quad (6) (x+4y)(x+6y) \quad (7) (x+y)(x+24y) \quad (8) (x-y)(x-24y)$$

次の式を因数分解せよ。

$$\begin{aligned}(1) \quad x^2 + 2x - 24 &= x^2 + (6-4)x + 6 \cdot (-4) \\ &= (x+6)(x-4)\end{aligned}$$

$$\begin{aligned}(2) \quad x^2 - 5x - 24 &= x^2 + (-8+3)x + (-8) \cdot 3 \\ &= (x-8)(x+3)\end{aligned}$$

$$\begin{aligned}(3) \quad x^2 - 10x - 24 &= x^2 + (-12+2)x + (-12) \cdot 2 \\ &= (x-12)(x+2)\end{aligned}$$

$$\begin{aligned}(4) \quad x^2 + 23x - 24 &= x^2 + (24-1)x + 24 \cdot (-1) \\ &= (x+24)(x-1)\end{aligned}$$

$$\begin{aligned}(5) \quad x^2 - 14xy + 24y^2 &= x^2 + (-2y-12y)x + (-2y) \cdot (-12y) \\ &= (x-2y)(x-12y)\end{aligned}$$

$$\begin{aligned}(6) \quad x^2 + 10xy + 24y^2 &= x^2 + (4y+6y)x + 4y \cdot 6y \\ &= (x+4y)(x+6y)\end{aligned}$$

$$\begin{aligned}(7) \quad x^2 + 25xy + 24y^2 &= x^2 + (y+24y)x + y \cdot 24y \\ &= (x+y)(x+24y)\end{aligned}$$

$$\begin{aligned}(8) \quad x^2 - 25xy + 24y^2 &= x^2 + (-y-24y)x + (-y) \cdot (-24y) \\ &= (x-y)(x-24y)\end{aligned}$$