

同類項をまとめる

多項式と同類項は分配法則を使ってまとめることができる。

分配法則

$$(ac + bc) = (a + b)c$$

$$\begin{aligned} 1 \quad & 5xy - 2xy \\ &= (5 - 2)xy \\ &= 3xy \end{aligned}$$

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

$$\begin{aligned} 3 \quad & 3x - 5y - 7x + 4y \\ &= (3 - 7)x + (-5 + 4)y \\ &= -4x - y \end{aligned}$$

$$\begin{aligned} 4 \quad & 6x^2 - 2x + 4x^2 - 3x \\ &= (6 + 4)x^2 + (-2 - 3)x \\ &= 10x^2 - 5x \end{aligned}$$

$$\begin{aligned} 5 \quad & \frac{1}{2}x - \frac{1}{3}y - \frac{1}{4}x + \frac{1}{6}y \\ &= \left(\frac{1}{2} - \frac{1}{4}\right)x + \left(-\frac{1}{3} + \frac{1}{6}\right)y \\ &= \left(\frac{2}{4} - \frac{1}{4}\right)x + \left(-\frac{2}{6} + \frac{1}{6}\right)y \\ &= \frac{1}{4}x - \frac{1}{6}y \end{aligned}$$

1 次の式と同類項をまとめて計算しなさい。

① $9x + 3x$

② $-4x^2 - 6x^2$

③ $-2x - 4y + 6x - 3y$

④ $5x^2 + 2x - 3x^2 + 4x$

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$$\begin{aligned} ① \quad & 9x + 3x \\ &= (9 + 3)x \\ &= 12x \end{aligned}$$

$$\begin{aligned} ② \quad & -4x^2 - 6x^2 \\ &= (-4 - 6)x^2 \\ &= -10x^2 \end{aligned}$$

$$\begin{aligned} ③ \quad & -2x - 4y + 6x - 3y \\ &= (-2 + 6)x + (-4 - 3)y \\ &= 4x - 7y \end{aligned}$$

$$\begin{aligned} ④ \quad & 5x^2 + 2x - 3x^2 + 4x \\ &= (5 - 3)x^2 + (2 + 4)x \\ &= 2x^2 + 6x \end{aligned}$$