

多項式の計算③ 解答と解説

1 解答 (1)  $6x - 5y$  (2)  $8a - 2b$  (3)  $-a + b$  (4)  $-6x - 3y$

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

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

$$\begin{aligned} (3) \quad 4(2a + b) - 3(3a + b) &= 8a + 4b - 9a - 3b \\ &= 8a - 9a + 4b - 3b \\ &= -a + b \end{aligned}$$

$$\begin{aligned} (4) \quad 6(x - 2y) - 3(4x - 3y) &= 6x - 12y - 12x + 9y \\ &= 6x - 12x - 12y + 9y \\ &= -6x - 3y \end{aligned}$$

2 解答 (1)  $\frac{3x + 2y}{4}$  (2)  $\frac{7}{6}b$  (3)  $\frac{5x - 5y}{6}$

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

$$\begin{aligned} (2) \quad \frac{a + 2b}{3} - \frac{2a - 3b}{6} &= \frac{2(a + 2b)}{6} - \frac{2a - 3b}{6} \\ &= \frac{2(a + 2b) - (2a - 3b)}{6} \\ &= \frac{2a + 4b - 2a + 3b}{6} \\ &= \frac{7}{6}b \end{aligned}$$

$$(3) \quad \frac{x - 3y}{2} + \frac{x + 2y}{3} = \frac{3(x - 3y)}{6} + \frac{2(x + 2y)}{6}$$

$$\begin{aligned} &= \frac{3(x - 3y) + 2(x + 2y)}{6} \\ &= \frac{3x - 9y + 2x + 4y}{6} \\ &= \frac{5x - 5y}{6} \end{aligned}$$

3 解答 (1)  $-7x + y$  (2)  $\frac{7x + 7y}{6}$

$$\begin{aligned} (1) \quad 3(x + 2y) - 5(2x + y) &= 3x + 6y - 10x - 5y \\ &= 3x - 10x + 6y - 5y \\ &= -7x + y \end{aligned}$$

$$\begin{aligned} (2) \quad \frac{x + 3y}{2} + \frac{2x - y}{3} &= \frac{3(x + 3y)}{6} + \frac{2(2x - y)}{6} \\ &= \frac{3(x + 3y) + 2(2x - y)}{6} \\ &= \frac{3x + 9y + 4x - 2y}{6} \\ &= \frac{7x + 7y}{6} \end{aligned}$$