

# 計算たしかめミックス (10)

名前

※ 解法は一例です。

■ (1) ~ (12) の計算をなさい。(13)、(14) は連立方程式を解きなさい。

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

$$\begin{aligned} (3) \quad (-7a)^2 = (-7a) \times (-7a) \\ = (-7) \times (-7) \times a \times a \\ = 49a^2 \end{aligned}$$

$$\begin{aligned} (5) \quad \frac{2}{3}(9x + 12y) = \frac{2}{3} \times 9x + \frac{2}{3} \times 12y \\ = 6x + 8y \end{aligned}$$

$$\begin{aligned} (7) \quad 6ab \times (-4c) = 6 \times a \times b \times (-4) \times c \\ = 6 \times (-4) \times a \times b \times c \\ = -24abc \end{aligned}$$

$$\begin{aligned} (9) \quad (4x + 5y) - (3x - 6y) + (x + 2y) \\ = 4x + 5y - 3x + 6y + x + 2y \\ = (4 - 3 + 1)x + (5 + 6 + 2)y \\ = 2x + 13y \end{aligned}$$

$$\begin{aligned} (11) \quad \frac{a - 5b}{4} - \frac{3a + b}{3} \\ = \frac{3(a - 5b)}{12} - \frac{4(3a + b)}{12} \\ = \frac{3(a - 5b) - 4(3a + b)}{12} \\ = \frac{3a - 15b - 12a - 4b}{12} \\ = \frac{-9a - 19b}{12} \end{aligned}$$

$$(13) \quad \begin{cases} y = 3x - 4 & \dots\dots \textcircled{1} \\ 7x - 2y = 11 & \dots\dots \textcircled{2} \end{cases}$$

① を ② に代入すると

$$\begin{aligned} 7x - 2(3x - 4) &= 11 \\ 7x - 6x + 8 &= 11 \\ x &= 3 \end{aligned}$$

$x = 3$  を ① に代入すると

$$y = 3 \times 3 - 4 = 5$$

よって  $x = 3, y = 5$

$$\begin{aligned} (2) \quad (4a^2 + 3a - 2) + (-2a^2 + 5a + 1) \\ = 4a^2 + 3a - 2 - 2a^2 + 5a + 1 \\ = (4 - 2)a^2 + (3 + 5)a + (-2 + 1) \\ = 2a^2 + 8a - 1 \end{aligned}$$

$$\begin{aligned} (4) \quad 25ab \div 5a = \frac{25ab}{5a} \\ = \frac{25 \times a \times b}{5 \times a} \\ = 5b \end{aligned}$$

$$(6) \quad 12a^3b \div 6ab \times 3b = \frac{12a^3b \times 3b}{6ab} = 6a^2b$$

$$\begin{aligned} (8) \quad (28x - 24y) \div 4 = \frac{28x}{4} - \frac{24y}{4} \\ = 7x - 6y \end{aligned}$$

$$\begin{aligned} (10) \quad 3(2x + y) + 2(4x - 3y) \\ = 6x + 3y + 8x - 6y \\ = (6 + 8)x + (3 - 6)y \\ = 14x - 3y \end{aligned}$$

$$\begin{aligned} (12) \quad 5a - \{6b + (4a - 3b) - 2\} \\ = 5a - (6b + 4a - 3b - 2) \\ = 5a - 6b - 4a + 3b + 2 \\ = (5 - 4)a + (-6 + 3)b + 2 \\ = a - 3b + 2 \end{aligned}$$

$$(14) \quad \begin{cases} 2x + 3y = 9 & \dots\dots \textcircled{1} \\ 3x + 2y = 1 & \dots\dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \times 3 \qquad \qquad 6x + 9y = 27 \\ \textcircled{2} \times 2 \qquad \qquad -) 6x + 4y = 2 \\ \hline \qquad \qquad \qquad \qquad 5y = 25 \\ \qquad \qquad \qquad \qquad y = 5 \end{array}$$

$y = 5$  を ① に代入すると

$$\begin{aligned} 2x + 15 &= 9 \\ 2x &= -6 \\ x &= -3 \end{aligned}$$

よって  $x = -3, y = 5$