

計算たしかめミックス（2）

名前

※ 解法は一例です。

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

$$(1) \frac{1}{3}(12x + 18y) = \frac{1}{3} \times 12x + \frac{1}{3} \times 18y$$

$$= 4x + 6y$$

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

$$\begin{aligned} (5) \quad & (-2a)^2 = (-2a) \times (-2a) \\ & = (-2) \times (-2) \times a \times a \\ & = 4a^2 \end{aligned}$$

$$\begin{aligned} (7) \quad & \frac{5a - 2b}{2} - \frac{2a + b}{3} \\ & = \frac{3(5a - 2b)}{6} - \frac{2(2a + b)}{6} \\ & = \frac{3(5a - 2b) - 2(2a + b)}{6} \\ & = \frac{15a - 6b - 4a - 2b}{6} \\ & = \frac{11a - 8b}{6} \end{aligned}$$

$$\begin{aligned} (9) \quad & 24ab \div 6b = \frac{24ab}{6b} \\ & = \frac{24 \times a \times b}{6 \times b} \\ & = 4a \end{aligned}$$

$$\begin{aligned} (11) \quad & 5a \times (-3bc) = 5 \times a \times (-3) \times b \times c \\ & = 5 \times (-3) \times a \times b \times c \\ & = -15abc \end{aligned}$$

$$\begin{aligned} (13) \quad & \begin{cases} 2x + 3y = 24 & \dots \textcircled{1} \\ 3x - 5y = 17 & \dots \textcircled{2} \end{cases} \\ & \begin{array}{rcl} \textcircled{1} \times 3 & & 6x + 9y = 72 \\ \textcircled{2} \times 2 & - & \underline{6x - 10y = 34} \\ & & 19y = 38 \\ & & y = 2 \end{array} \end{aligned}$$

$y = 2$ を ① に代入すると

$$2x + 6 = 24$$

$$2x = 18$$

$$x = 9$$

よって $x = 9, y = 2$

$$(2) \quad 4a^3b \div 2ab \times 8b = \frac{4a^3b \times 8b}{2ab}$$

$$= 16a^2b$$

$$\begin{aligned} (4) \quad & (3a^2 + 2a - 1) + (-2a^2 + 5a + 9) \\ & = 3a^2 + 2a - 1 - 2a^2 + 5a + 9 \\ & = (3 - 2)a^2 + (2 + 5)a + (-1 + 9) \\ & = a^2 + 7a + 8 \end{aligned}$$

$$\begin{aligned} (6) \quad & (24x - 20y) \div 4 = \frac{24x}{4} - \frac{20y}{4} \\ & = 6x - 5y \end{aligned}$$

$$\begin{aligned} (8) \quad & 9a - \{3b + (5a - 7b) - 1\} \\ & = 9a - (3b + 5a - 7b - 1) \\ & = 9a - 3b - 5a + 7b + 1 \\ & = (9 - 5)a + (-3 + 7)b + 1 \\ & = 4a + 4b + 1 \end{aligned}$$

$$\begin{aligned} (10) \quad & (2x + 3y) - (4x - 5y) + (6x + y) \\ & = 2x + 3y - 4x + 5y + 6x + y \\ & = (2 - 4 + 6)x + (3 + 5 + 1)y \\ & = 4x + 9y \end{aligned}$$

$$\begin{aligned} (12) \quad & 3(x + y) + 4(x - 3y) \\ & = 3x + 3y + 4x - 12y \\ & = (3 + 4)x + (3 - 12)y \\ & = 7x - 9y \end{aligned}$$

$$\begin{aligned} (14) \quad & \begin{cases} x - 2y = 7 & \dots \textcircled{1} \\ y = -3x & \dots \textcircled{2} \end{cases} \\ & \textcircled{2} \text{ を } \textcircled{1} \text{ に代入すると} \end{aligned}$$

$$x - 2 \times (-3x) = 7$$

$$7x = 7$$

$$x = 1$$

$x = 1$ を ② に代入すると

$$y = -3 \times 1 = -3$$

よって $x = 1, y = -3$