

計算たしかめミックス (5)

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。

(1) $(4x - 5y) - (-2x + 5y)$

$$= 4x - 5y + 2x - 5y$$

$$= (4 + 2)x + (-5 - 5)y$$

$$= 6x - 10y$$

(2) $(3a^2 + 2a - 1) - (-2a^2 + 3a - 4)$

$$= 3a^2 + 2a - 1 + 2a^2 - 3a + 4$$

$$= (3 + 2)a^2 + (2 - 3)a + (-1 + 4)$$

$$= 5a^2 - a + 3$$

(3) $24a^3b^2 \div 6a^2b = \frac{24a^3b^2}{6a^2b}$

$$= \frac{24 \times a \times a \times a \times b \times b}{6 \times a \times a \times b}$$

$$= 4ab$$

(4) $3ab \times (-4b) = 3 \times a \times b \times (-4) \times b$

$$= 3 \times (-4) \times a \times b \times b$$

$$= -12ab^2$$

(5) $\frac{2a - 3b}{6} - \frac{3a + 4b}{2}$

$$= \frac{2a - 3b}{6} - \frac{3(3a + 4b)}{6}$$

$$= \frac{2a - 3b - 3(3a + 4b)}{6}$$

$$= \frac{2a - 3b - 9a - 12b}{6}$$

$$= \frac{-7a - 15b}{6}$$

(6) $5a - \{3a + (2a - b) - 4\}$

$$= 5a - (3a + 2a - b - 4)$$

$$= 5a - 3a - 2a + b + 4$$

$$= (5 - 3 - 2)a + b + 4$$

$$= b + 4$$

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

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

$$= -27x^3$$

(8) $\frac{2}{3}(9x + 6y) = \frac{2}{3} \times 9x + \frac{2}{3} \times 6y$

$$= 6x + 4y$$

(9) $(24x - 8y) \div 4 = \frac{24x}{4} - \frac{8y}{4}$

$$= 6x - 2y$$

(10) $12a^2b^3 \div 4ab \times 3b = \frac{12a^2b^3 \times 3b}{4ab}$

$$= 9ab^3$$

(11) $3(2x - y) + 2(x - 3y)$

$$= 6x - 3y + 2x - 6y$$

$$= (6 + 2)x + (-3 - 6)y$$

$$= 8x - 9y$$

(12) $(2x + 3y) + (3x - 4y) - (5x + 6y)$

$$= 2x + 3y + 3x - 4y - 5x - 6y$$

$$= (2 + 3 - 5)x + (3 - 4 - 6)y$$

$$= -7y$$

(13) $\begin{cases} 5x + 7y = 16 & \dots\dots ① \\ 2x - 3y = -11 & \dots\dots ② \end{cases}$

$$① \times 3 \quad 15x + 21y = 48$$

$$② \times 7 \quad +) \quad 14x - 21y = -77$$

$$\hline 29x \quad = -29$$

$$x = -1$$

$x = -1$ を ① に代入すると $-5 + 7y = 16$

$$7y = 21$$

$$y = 3$$

よって $x = -1, y = 3$

(14) $\begin{cases} y = -3x & \dots\dots ① \\ 5x + 3y = -12 & \dots\dots ② \end{cases}$

① を ② に代入すると

$$5x + 3 \times (-3x) = -12$$

$$-4x = -12$$

$$x = 3$$

$x = 3$ を ① に代入すると

$$y = -3 \times 3 = -9$$

よって $x = 3, y = -9$