

# 計算たしかめミックス (3)

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。

$$\begin{aligned} (1) \quad (-4a)^3 &= (-4a) \times (-4a) \times (-4a) \\ &= (-4) \times (-4) \times (-4) \times a \times a \times a \\ &= -64a^3 \end{aligned}$$

$$\begin{aligned} (3) \quad \frac{a-3b}{3} - \frac{2a-b}{5} &= \frac{5(a-3b)}{15} - \frac{3(2a-b)}{15} \\ &= \frac{5(a-3b)-3(2a-b)}{15} \\ &= \frac{5a-15b-6a+3b}{15} \\ &= \frac{-a-12b}{15} \end{aligned}$$

$$\begin{aligned} (5) \quad 12a^2b \div 3a &= \frac{12a^2b}{3a} \\ &= \frac{12 \times a \times a \times b}{3 \times a} \\ &= 4ab \end{aligned}$$

$$\begin{aligned} (7) \quad 3a^2 \times (-2a) &= 3 \times a \times a \times (-2) \times a \\ &= 3 \times (-2) \times a \times a \times a \\ &= -6a^3 \end{aligned}$$

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

$$\begin{aligned} (11) \quad \frac{3}{4}(12x-8y) &= \frac{3}{4} \times 12x - \frac{3}{4} \times 8y \\ &= 9x-6y \end{aligned}$$

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

① を ② に代入すると

$$\begin{aligned} 3(y-1)-2y &= 1 \\ 3y-3-2y &= 1 \\ y &= 4 \end{aligned}$$

y=4 を ① に代入すると

$$\begin{aligned} x &= 4-1=3 \\ \text{よって } x &= 3, y = 4 \end{aligned}$$

$$\begin{aligned} (2) \quad (32x+12y) \div 4 &= \frac{32x}{4} + \frac{12y}{4} \\ &= 8x+3y \end{aligned}$$

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

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

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

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

$$\begin{aligned} (12) \quad 6a^3b^2 \div 3ab \times 2a &= \frac{6a^3b^2 \times 2a}{3ab} \\ &= 4a^3b \end{aligned}$$

$$(14) \quad \begin{cases} 5x-2y=19 & \dots\dots ① \\ 4x+5y=2 & \dots\dots ② \end{cases}$$

$$\begin{array}{r} ① \times 5 \quad 25x-10y=95 \\ ② \times 2 \quad +) \quad 8x+10y=4 \\ \hline 33x \quad \quad = 99 \\ x=3 \end{array}$$

x=3 を ① に代入すると

$$\begin{aligned} 15-2y &= 19 \\ -2y &= 4 \\ y &= -2 \end{aligned}$$

よって  $x=3, y=-2$