

連立方程式（代入法）

組 番 名前

1 次の連立方程式を解きなさい。

$$\textcircled{1} \begin{cases} x - 2y = -10 \\ x = y + 3 \end{cases}$$

$$\begin{aligned} y + 3 - 2y &= -10 \\ -y &= -13 \\ y &= 13 \\ x &= 16 \end{aligned} \quad \underline{x=16, y=13}$$

$$\textcircled{2} \begin{cases} y = x + 3 \\ 5x - 2y = 3 \end{cases}$$

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

$$\textcircled{3} \begin{cases} x + 3y = 3 \\ 3y = 2x + 12 \end{cases}$$

$$\begin{aligned} x + 2x + 12 &= 3 \\ 3x &= -9 \\ x &= -3 \\ y &= 2 \end{aligned} \quad \underline{x=-3, y=2}$$

$$\textcircled{4} \begin{cases} y = 3x + 1 \\ y = -2x - 9 \end{cases}$$

$$\begin{aligned} 3x + 1 &= -2x - 9 \\ 5x &= -10 \\ x &= -2 \\ y &= -5 \end{aligned} \quad \underline{x=-2, y=-5}$$

$$\textcircled{7} \begin{cases} 2x + y = 5 \\ x = -3y + 5 \end{cases}$$

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

$$\textcircled{8} \begin{cases} 7 - 8x = 3y \\ 2x + 3y = -5 \end{cases}$$

$$\begin{aligned} 2x + 7 - 8x &= -5 \\ -6x &= -12 \\ x &= 2 \\ y &= -3 \end{aligned} \quad \underline{x=2, y=-3}$$

$$\textcircled{9} \begin{cases} -x + 15 = 4y \\ 7x - 4y = 9 \end{cases}$$

$$\begin{aligned} 7x - (-x + 15) &= 9 \\ 7x + x - 15 &= 9 \\ 8x &= 24 \\ x &= 3 \\ y &= 3 \end{aligned} \quad \underline{x=3, y=3}$$

$$\textcircled{10} \begin{cases} 3x + 2y = -6 \\ 3x = -4y \end{cases}$$

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

2 連立方程式 $\begin{cases} 4bx + 3ay = 26 \\ -6ax + 5by = 9 \end{cases}$ の解が、 $x=2, y=-3$ のとき、 a, b の値をそれぞれ求めなさい。

$$\begin{aligned} 8b - 9a &= 26 \\ -12a - 15b &= 9 \quad \times 4 \\ -36a + 32b &= 104 \quad \times 3 \\ \hline -) -36a - 45b &= 27 \\ \hline 77b &= 77 \\ b &= 1 \\ a &= -2 \end{aligned}$$

$$\underline{a=-2, b=1}$$