

1 次の連立方程式を解きなさい。

$$(1) \begin{cases} 3x + 4y = 39 & \dots\dots ① \\ 3(x + 2y) = 51 & \dots\dots ② \end{cases}$$

$$(2) \begin{cases} 7(x - y) + 3y = -49 & \dots\dots ① \\ -9x + 4y = 55 & \dots\dots ② \end{cases}$$

$$(3) \begin{cases} 14x + 6y = 24 & \dots\dots ① \\ x - 8(x + y) = 3 & \dots\dots ② \end{cases}$$

$$(4) \begin{cases} -(6x + y) - y = 9 & \dots\dots ① \\ -4x - 3y = -9 & \dots\dots ② \end{cases}$$

1 次の連立方程式を解きなさい。

$$(1) \begin{cases} 3x + 4y = 39 & \dots\dots ① \\ 3(x + 2y) = 51 & \dots\dots ② \end{cases}$$

②のかっこをはずすと、

$$3x + 6y = 51 \quad \dots\dots ③$$

①と③の連立方程式を解くと、

$$\begin{array}{r} ① \quad 3x + 4y = 39 \\ ③ \quad -) 3x + 6y = 51 \\ \hline \quad \quad -2y = -12 \\ \quad \quad \quad y = 6 \end{array}$$

$y = 6$ を①に代入すると、

$$\begin{array}{r} 3x + 4 \times 6 = 39 \\ 3x = 15 \\ x = 5 \end{array} \quad \text{答} \begin{cases} x = 5 \\ y = 6 \end{cases}$$

$$(3) \begin{cases} 14x + 6y = 24 & \dots\dots ① \\ x - 8(x + y) = 3 & \dots\dots ② \end{cases}$$

②のかっこをはずすと、

$$\begin{array}{r} x - 8x - 8y = 3 \\ -7x - 8y = 3 \quad \dots\dots ③ \end{array}$$

①と③の連立方程式を解くと、

$$\begin{array}{r} ① \quad 14x + 6y = 24 \\ ③ \times 2 \quad +) -14x - 16y = 6 \\ \hline \quad \quad -10y = 30 \\ \quad \quad \quad y = -3 \end{array}$$

$y = -3$ を③に代入すると、

$$\begin{array}{r} -7x - 8 \times (-3) = 3 \\ -7x = -21 \\ x = 3 \end{array} \quad \text{答} \begin{cases} x = 3 \\ y = -3 \end{cases}$$

$$(2) \begin{cases} 7(x - y) + 3y = -49 & \dots\dots ① \\ -9x + 4y = 55 & \dots\dots ② \end{cases}$$

①のかっこをはずすと、

$$\begin{array}{r} 7x - 7y + 3y = -49 \\ 7x - 4y = -49 \quad \dots\dots ③ \end{array}$$

③と②の連立方程式を解くと、

$$\begin{array}{r} ③ \quad 7x - 4y = -49 \\ ② \quad +) -9x + 4y = 55 \\ \hline \quad \quad -2x = 6 \\ \quad \quad \quad x = -3 \end{array}$$

$x = -3$ を③に代入すると、

$$\begin{array}{r} 7 \times (-3) - 4y = -49 \\ -4y = -28 \\ y = 7 \end{array} \quad \text{答} \begin{cases} x = -3 \\ y = 7 \end{cases}$$

$$(4) \begin{cases} -(6x + y) - y = 9 & \dots\dots ① \\ -4x - 3y = -9 & \dots\dots ② \end{cases}$$

①のかっこをはずすと、

$$\begin{array}{r} -6x - 6y - y = 9 \\ -6x - 7y = 9 \quad \dots\dots ③ \end{array}$$

③と②の連立方程式を解くと、

$$\begin{array}{r} ③ \times 2 \quad -12x - 14y = 18 \\ ② \times 3 \quad -) -12x - 9y = -27 \\ \hline \quad \quad -5y = 45 \\ \quad \quad \quad y = -9 \end{array}$$

$y = -9$ を②に代入すると、

$$\begin{array}{r} -4x - 3 \times (-9) = -9 \\ -4x = -36 \\ x = 9 \end{array} \quad \text{答} \begin{cases} x = 9 \\ y = -9 \end{cases}$$