

1 次の連立方程式を解きなさい。

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

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

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

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

1 次の連立方程式を解きなさい。

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

②のかっこをはずすと、

$$3x + 6y = 51 \quad \cdots \cdots \textcircled{3}$$

①と③の連立方程式を解くと、

$$\textcircled{1} \quad 3x + 4y = 39$$

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

$y = 6$ を①に代入すると、

$$3x + 4 \times 6 = 39$$

$$3x = 15$$

$$x = 5$$

$$\text{答} \begin{cases} x = 5 \\ y = 6 \end{cases}$$

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

②のかっこをはずすと、

$$x - 8x - 8y = 3$$

$$-7x - 8y = 3 \quad \cdots \cdots \textcircled{3}$$

①と③の連立方程式を解くと、

$$\textcircled{1} \quad 14x + 6y = 24$$

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

$y = -3$ を①に代入すると、

$$-7x - 8 \times (-3) = 3$$

$$-7x = -21$$

$$x = 3$$

$$\text{答} \begin{cases} x = 3 \\ y = -3 \end{cases}$$

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

①のかっこをはずすと、

$$7x - 7y + 3y = -49$$

$$7x - 4y = -49 \quad \cdots \cdots \textcircled{3}$$

③と②の連立方程式を解くと、

$$\textcircled{3} \quad 7x - 4y = -49$$

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

$x = -3$ を③に代入すると、

$$7 \times (-3) - 4y = -49$$

$$-4y = -28$$

$$y = 7$$

$$\text{答} \begin{cases} x = -3 \\ y = 7 \end{cases}$$

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

①のかっこをはずすと、

$$-6x - 6y - y = 9$$

$$-6x - 7y = 9 \quad \cdots \cdots \textcircled{3}$$

③と②の連立方程式を解くと、

$$\textcircled{3} \times 2 \quad -12x - 14y = 18$$

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

$y = -9$ を②に代入すると、

$$-4x - 3 \times (-9) = -9$$

$$-4x = -36$$

$$x = 9$$

$$\text{答} \begin{cases} x = 9 \\ y = -9 \end{cases}$$