

1 次の連立方程式を加減法で解きなさい。

$$(1) \begin{cases} -2x - 11y = -40 & \cdots \textcircled{1} \\ -x - 3y = -10 & \cdots \textcircled{2} \end{cases}$$

$$(2) \begin{cases} -x - 4y = -8 & \cdots \textcircled{1} \\ 4x - 7y = 32 & \cdots \textcircled{2} \end{cases}$$

$$(3) \begin{cases} -3x + 5y = -16 & \cdots \textcircled{1} \\ 5x + 4y = -72 & \cdots \textcircled{2} \end{cases}$$

$$(4) \begin{cases} 2x + 5y = 45 & \cdots \textcircled{1} \\ 5x + 4y = 53 & \cdots \textcircled{2} \end{cases}$$

1 次の連立方程式を加減法で解きなさい。

$$(1) \begin{cases} -2x - 11y = -40 & \cdots \cdots \textcircled{1} \\ -x - 3y = -10 & \cdots \cdots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \qquad -2x - 11y = -40 \\ \textcircled{2} \times 2 \quad -) \quad -2x - 6y = -20 \\ \hline \qquad \qquad -5y = -20 \\ \qquad \qquad \qquad y = 4 \end{array}$$

$y = 4$ を②に代入すると、

$$\begin{aligned} -x - 3 \times 4 &= -10 \\ -x - 12 &= -10 \\ -x &= 2 \\ x &= -2 \end{aligned}$$

$$\text{答} \begin{cases} x = -2 \\ y = 4 \end{cases}$$

$$(2) \begin{cases} -x - 4y = -8 & \cdots \cdots \textcircled{1} \\ 4x - 7y = 32 & \cdots \cdots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \times 4 \quad -4x - 16y = -32 \\ \textcircled{2} \qquad \quad +) \quad 4x - 7y = 32 \\ \hline \qquad \qquad -33y = 0 \\ \qquad \qquad \qquad y = 0 \end{array}$$

$y = 0$ を①に代入すると、

$$\begin{aligned} -x - 4 \times 0 &= -8 \\ -x &= -8 \\ x &= 8 \end{aligned}$$

$$\text{答} \begin{cases} x = 8 \\ y = 0 \end{cases}$$

$$(3) \begin{cases} -3x + 5y = -16 & \cdots \cdots \textcircled{1} \\ 5x + 4y = -72 & \cdots \cdots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \times 5 \quad -15x + 25y = -80 \\ \textcircled{2} \times 3 \quad +) \quad 15x + 12y = -216 \\ \hline \qquad \qquad 37y = -296 \\ \qquad \qquad \qquad y = -8 \end{array}$$

$y = -8$ を①に代入すると、

$$\begin{aligned} -3x + 5 \times (-8) &= -16 \\ -3x - 40 &= -16 \\ -3x &= 24 \\ x &= -8 \end{aligned}$$

$$\text{答} \begin{cases} x = -8 \\ y = -8 \end{cases}$$

$$(4) \begin{cases} 2x + 5y = 45 & \cdots \cdots \textcircled{1} \\ 5x + 4y = 53 & \cdots \cdots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \times 5 \quad 10x + 25y = 225 \\ \textcircled{2} \times 2 \quad -) \quad 10x + 8y = 106 \\ \hline \qquad \qquad 17y = 119 \\ \qquad \qquad \qquad y = 7 \end{array}$$

$y = 7$ を①に代入すると、

$$\begin{aligned} 2x + 5 \times 7 &= 45 \\ 2x + 35 &= 45 \\ 2x &= 10 \\ x &= 5 \end{aligned}$$

$$\text{答} \begin{cases} x = 5 \\ y = 7 \end{cases}$$