

問題 次の連立方程式を解きなさい。

$$(1) \begin{cases} 3x + y = 11 \\ 3x - 2y = 5 \end{cases}$$

$$\begin{array}{r} 3x + y = 11 \\ -) 3x - 2y = 5 \\ \hline 3y = 6 \\ \boxed{y = 2} \end{array}$$

$$\begin{array}{l} 3x + 2 = 11 \text{ (上の式)} \\ 3x = 11 - 2 \\ 3x = 9 \\ \boxed{x = 3} \end{array}$$

$$\begin{array}{l} 3x - 2y = 5 \text{ (下の式)} \\ 9 - 4 = 5 \text{ --- ok.} \end{array}$$

答.  $x = 3$   $y = 2$

$$(2) \begin{cases} 7x - 4y = 2 \\ -9x + 4y = 2 \end{cases}$$

$$\begin{array}{r} 7x - 4y = 2 \\ +) -9x + 4y = 2 \\ \hline -2x = 4 \\ \boxed{x = -2} \end{array}$$

$$\begin{array}{l} 7x - 4y = 2 \text{ (上の式)} \\ -14 - 4y = 2 \\ -4y = 2 + 14 \\ -4y = 16 \\ \boxed{y = -4} \end{array}$$

$$\begin{array}{l} 7x - 4y = 2 \text{ (上の式)} \\ -14 + 16 = 2 \text{ --- ok} \end{array}$$

答.  $x = -2$   $y = -4$

$$(3) \begin{cases} x + y = -3 \\ x - y = 7 \end{cases}$$

$$\begin{array}{r} x + y = -3 \\ +) x - y = 7 \\ \hline 2x = 4 \\ \boxed{x = 2} \end{array}$$

$$\begin{array}{l} x - y = 7 \text{ (下の式)} \\ 2 - y = 7 \\ -y = 7 - 2 \\ \boxed{y = -5} \end{array}$$

$$\begin{array}{l} x + y = -3 \text{ (下の式)} \\ 2 - 5 = -3 \text{ --- ok.} \end{array}$$

答.  $x = 2$   $y = -5$

$$(4) \begin{cases} 3x + 7y = 5 \\ x - 7y = -1 \end{cases}$$

$$\begin{array}{r} 3x + 7y = 5 \\ +) x - 7y = -1 \\ \hline 4x = 4 \\ \boxed{x = 1} \end{array}$$

$$\begin{array}{l} x - 7y = -1 \text{ (下の式)} \\ 1 - 7y = -1 \\ -7y = -1 - 1 \\ -7y = -2 \\ \boxed{y = \frac{2}{7}} \end{array}$$

$$\begin{array}{l} 3x + 7y = 5 \text{ (上の式)} \\ 3 + 7 \times \frac{2}{7} = 5 \text{ --- ok.} \end{array}$$

答.  $x = 1$   $y = \frac{2}{7}$