

# 【中2数学 | 連立方程式】

1、次の連立方程式を解きなさい。

ポイント  $x = \square y + \Delta$  や  $y = \square x + \star$   
の形にして代入する!!

$$\square(1) \begin{cases} y = 2x & \dots \textcircled{1} \\ 2x + 3y = 24 & \dots \textcircled{2} \end{cases}$$

①を②に代入して

$$\begin{aligned} 2x + 3 \times 2x &= 24 \\ 8x &= 24 \\ x &= 3 \end{aligned}$$

$$\text{これと①より } y = 2 \times 3 = 6$$

$$(x, y) = (3, 6)$$

$$\square(2) \begin{cases} 4x - y = 18 & \dots \textcircled{1} \\ y = -5x & \dots \textcircled{2} \end{cases}$$

②を①に代入して

$$\begin{aligned} 4x - (-5x) &= 18 \\ 9x &= 18 \end{aligned}$$

$$\begin{aligned} x &= 2 \\ \text{これと②より } y &= -5 \times 2 = -10 \end{aligned}$$

$$(x, y) = (2, -10)$$

$$\square(3) \begin{cases} 5x - 2y = -9 & \dots \textcircled{1} \\ y = 3x + 5 & \dots \textcircled{2} \end{cases}$$

②を①に代入して

$$\begin{aligned} 5x - 2(3x + 5) &= -9 \\ -x - 10 &= -9 \\ x &= -1 \end{aligned}$$

$$\text{これと②より } y = 3 \times (-1) + 5 = 2$$

$$(x, y) = (-1, 2)$$

$$\square(4) \begin{cases} y = -2x - 1 & \dots \textcircled{1} \\ -4x + 3y = 17 & \dots \textcircled{2} \end{cases}$$

①を②に代入して

$$\begin{aligned} -4x + 3(-2x - 1) &= 17 \\ -10x - 3 &= 17 \\ 10x &= -20 \end{aligned}$$

$$\begin{aligned} x &= -2 \\ \text{これと①より } y &= -2 \times (-2) - 1 = 4 - 1 = 3 \end{aligned}$$

$$(x, y) = (-2, 3)$$

$$\square(5) \begin{cases} x = y + 3 & \dots \textcircled{1} \\ 3x - 4y = 11 & \dots \textcircled{2} \end{cases}$$

①を②に代入して

$$\begin{aligned} 3(y + 3) - 4y &= 11 \\ -y + 9 &= 11 \\ y &= -2 \end{aligned}$$

$$\text{これと①より } x = -2 + 3 = 1$$

$$(x, y) = (1, -2)$$

$$\square(6) \begin{cases} 6x + 5y = 17 & \dots \textcircled{1} \\ x = 4 - 2y & \dots \textcircled{2} \end{cases}$$

②を①に代入して

$$\begin{aligned} 6(4 - 2y) + 5y &= 17 \\ 24 - 12y + 5y &= 17 \\ -7y &= -7 \\ y &= 1 \end{aligned}$$

$$\text{これと②より } x = 4 - 2 \times 1 = 2$$

$$(x, y) = (2, 1)$$