単元別演習
【中２数学｜連立方程式】

1、次の連立方程式を解きなさい。

□(1) $\begin{cases} y = 2x & \cdots ① \\ 2x + 3y = 24 & \cdots ② \end{cases}$

① を ② に代入

$2x + 6x = 24$

$8x = 24 \quad \therefore x = 3$

① に代入

$y = 6$

$\therefore x = 3,\ y = 6$

□(2) $\begin{cases} 4x - y = 18 & \cdots ① \\ y = -5x & \cdots ② \end{cases}$

② を ① に代入

$4x - (-5x) = 18$

$9x = 18 \quad \therefore x = 2$

② に代入

$y = -10$

$\therefore x = 2,\ y = -10$

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

② を ① に代入

$5x - 2(3x + 5) = -9$

$5x - 6x - 10 = -9$

$-x = 1 \quad \therefore x = -1$

② に代入

$y = -3 + 5 = 2$

$\therefore x = -1,\ y = 2$

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

① を ② に代入

$-4x + 3(-2x - 1) = 17$

$-4x - 6x - 3 = 17$

$-10x = 20 \quad \therefore x = -2$

① に代入

$y = 4 - 1 = 3$

$\therefore x = -2,\ y = 3$

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

① を ② に代入

$3(y + 3) - 4y = 11$

$3y + 9 - 4y = 11$

$-y = 2 \quad \therefore y = -2$

① に代入

$x = -2 + 3 = 1$

$\therefore x = 1,\ y = -2$

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

② を ① に代入

$6(4 - 2y) + 5y = 17$

$24 - 12y + 5y = 17$

$-7y = -7 \quad \therefore y = 1$

② に代入

$x = 4 - 2 = 2$

$\therefore x = 2,\ y = 1$