

【中2数学 | 連立方程式】

1、次の連立方程式を解きなさい。

$$\square(1) \begin{cases} x - \frac{y}{2} = 1 & \dots \textcircled{1} \\ 2x + y = 10 & \dots \textcircled{2} \end{cases}$$

① $\times 2 - \textcircled{2}$ より、
 $-2y = -8 \quad \therefore y = 4$

② に代入
 $2x + 4 = 10$
 $2x = 6 \quad \therefore x = 3$

$\therefore x = 3, y = 4$

$$\square(2) \begin{cases} -x + 2y = 10 & \dots \textcircled{1} \\ \frac{2}{3}x + 5y = 6 & \dots \textcircled{2} \end{cases}$$

① $\times 2 + \textcircled{2} \times 3$ より、
 $19y = 38 \quad \therefore y = 2$

① に代入
 $-x + 4 = 10 \quad \therefore x = -6$

$\therefore x = -6, y = 2$

$$\square(3) \begin{cases} 3x + 2y = 3 & \dots \textcircled{1} \\ \frac{3}{5}x - \frac{2}{3}y = 7 & \dots \textcircled{2} \end{cases}$$

① $\times 3 - \textcircled{2} \times 15$ より、
 $16y = -96 \quad \therefore y = -6$

① に代入
 $3x - 12 = 3 \quad \therefore x = 5$

$\therefore x = 5, y = -6$

$$\square(4) \begin{cases} 4x - y = 8 & \dots \textcircled{1} \\ \frac{5}{6}x - \frac{3}{8}y = \frac{1}{3} & \dots \textcircled{2} \end{cases}$$

① $\times 5 - \textcircled{2} \times 24$ より、
 $4y = 32 \quad \therefore y = 8$

① に代入
 $4x - 8 = 8 \quad \therefore x = 4$

$\therefore x = 4, y = 8$

$$\square(5) \begin{cases} x - 3y = 8 & \dots \textcircled{1} \\ \frac{x-2y}{6} = y + 3 & \dots \textcircled{2} \end{cases}$$

② $\times 6$ より、
 $x - 2y = 6y + 18$
 $x - 8y = 18 \dots \textcircled{2}'$

① $- \textcircled{2}'$ より、
 $5y = -10 \quad \therefore y = -2$

① に代入
 $x + 6 = 8 \quad \therefore x = 2$

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

$$\square(6) \begin{cases} 2x - y = \frac{5x-4}{3} & \dots \textcircled{1} \\ 5x + 2y = -3 & \dots \textcircled{2} \end{cases}$$

① $\times 3$ より、
 $6x - 3y = 5x - 4$
 $x - 3y = -4 \dots \textcircled{1}'$

② $- \textcircled{1}' \times 5$ より、
 $17y = 17 \quad \therefore y = 1$

② に代入
 $5x + 2 = -3 \quad \therefore x = -1$

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