

【中2数学 | 連立方程式】

【1】 次の連立方程式を解きなさい。

$$(1) \begin{cases} 5(x+1) = 4(y+6) \cdots \textcircled{1} \\ x - 2y = 1 \cdots \textcircled{2} \end{cases} \quad (2) \begin{cases} 2(x+1) - 3(y-2) = 8 \cdots \textcircled{1} \\ 5x + 2(y+1) = 10 \cdots \textcircled{2} \end{cases}$$

① より

$$5x + 5 = 4y + 24$$

$$5x - 4y = 19 \cdots \textcircled{1}$$

①' - ② × 2 より

$$3x = 17$$

$$\therefore x = \frac{17}{3}$$

② に代入

$$\frac{17}{3} - 2y = 1 \quad \therefore y = \frac{7}{3}$$

$$\therefore x = \frac{17}{3}, y = \frac{7}{3}$$

① より

$$2x - 3y = 0 \cdots \textcircled{1}'$$

② より

$$5x + 2y = 8 \cdots \textcircled{2}'$$

①' × 2 + ②' × 3 より

$$19x = 24$$

$$\therefore x = \frac{24}{19}$$

①' に代入

$$\frac{48}{19} - 3y = 0$$

$$\therefore y = \frac{16}{19}$$

$$\therefore x = \frac{24}{19}, y = \frac{16}{19}$$

【2】 次の連立方程式を解きなさい。

$$(1) \begin{cases} \frac{x}{6} + \frac{y-2}{9} = 2 \cdots \textcircled{1} \\ 2x - 7y = 10 \cdots \textcircled{2} \end{cases} \quad (2) \begin{cases} x - 3y = 1 \cdots \textcircled{1} \\ 0.07(x+y) - 0.1y = 0.13 \cdots \textcircled{2} \end{cases}$$

① × 18 より

$$3x + 2(y-2) = 36$$

$$3x + 2y = 40 \cdots \textcircled{1}$$

② × 3 - ①' × 2

$$-25y = -50$$

$$\therefore y = 2$$

② に代入

$$2x - 14 = 10$$

$$\therefore x = 12$$

$$\therefore x = 12, y = 2$$

② × 100 より

$$7(x+y) - 10y = 13$$

$$7x - 3y = 13 \cdots \textcircled{2}'$$

②' - ①' より

$$6x = 12$$

$$\therefore x = 2$$

①' に代入

$$2 - 3y = 1$$

$$\therefore y = \frac{1}{3}$$

$$\therefore x = 2, y = \frac{1}{3}$$

YouTubeチャンネルも見てね▶ 『ふじわら塾長』で検索!!

