

76

連立方程式の解き方

年 組 番 名前

●例題1●

次の連立方程式を解きなさい

$$\begin{cases} 3x - y = -3 \cdots ① \\ 2x + y = 8 \cdots ② \end{cases}$$

①+②

$$\begin{array}{r} 3x - y = -3 \\ +) 2x + y = 8 \\ \hline 5x \quad = 5 \end{array}$$

異符号の場合は和
同符号の場合は差
で一方を消去

$$x = 1$$

x = 1 を②へ代入

$$2 \times 1 + y = 8$$

$$y = 6$$

→61の例題2, 4へ

よって、x = 1、y = 6 →63の例題1, 2へ

①でもOK

問1 次の連立方程式を解きなさい

$$(1) \begin{cases} x + 2y = 2 \cdots ① \\ x - y = 8 \cdots ② \end{cases}$$

①-②

$$\begin{array}{r} x + 2y = 2 \\ -) x - y = 8 \\ \hline 3y = -6 \end{array}$$

$$y = -2$$

y = -2 を①に代入

$$x + 2 \times (-2) = 2$$

$$x - 4 = 2$$

$$x = 6$$

②でもOK

答. x = 6、y = -2

$$(2) \begin{cases} x - 2y = -10 \cdots ① \\ 5x + 2y = -2 \cdots ② \end{cases}$$

①+②

$$\begin{array}{r} x - 2y = -10 \\ +) 5x + 2y = -2 \\ \hline 6x \quad = -12 \end{array}$$

$$x = -2$$

x = -2 を②へ代入

$$5 \times (-2) + 2y = -2$$

$$-10 + 2y = -2$$

$$2y = 8$$

$$y = 4$$

①でもOK

答. x = -2、y = 4

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

①-②

$$\begin{array}{r} 2x + y = 5 \\ -) 2x - 4y = 10 \\ \hline 5y = -5 \end{array}$$

$$y = -1$$

②でもOK

y = -1 を①へ代入

$$2x - 1 = 5$$

$$2x = 6$$

$$x = 3$$

答. x = 3、y = -1

$$(4) \begin{cases} -x - 3y = 2 \cdots ① \\ 4x - 3y = 7 \cdots ② \end{cases}$$

①-②

$$\begin{array}{r} -x - 3y = 2 \\ -) 4x - 3y = 7 \\ \hline -5x \quad = -5 \end{array}$$

$$x = 1$$

x = 1 を②へ代入

$$4 \times 1 - 3y = 7$$

$$-3y = 3$$

$$y = -1$$

①でもOK

答. x = 1、y = -1

$$(5) \begin{cases} 6x - 9y = -21 \cdots ① \\ 6x + 4y = -8 \cdots ② \end{cases}$$

①-②

$$\begin{array}{r} 6x - 9y = -21 \\ -) 6x + 4y = -8 \\ \hline -13y = -13 \end{array}$$

$$y = 1$$

y = 1 を②へ代入

$$6x + 4 \times 1 = -8$$

$$6x = -12$$

$$x = -2$$

①でもOK

答. x = -2、y = 1