

連立方程式 加減法2

連立方程式の計算

NO.4

学習日 月 日

名前

/5 点

◆次の連立方程式を解きなさい

$$(1) \quad \begin{cases} 2x - 3y = 5 \\ 3x + y = 13 \end{cases}$$

$$(2) \quad \begin{cases} 2x + 3y = 5 \\ x + 2y = 4 \end{cases}$$

$$(3) \quad \begin{cases} 3x + y = 5 \\ 2x - 3y = 7 \end{cases}$$

$$(4) \quad \begin{cases} 4x + 3y = 9 \\ 2x - y = 7 \end{cases}$$

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

解答

$$(1) \quad \begin{cases} 2x - 3y = 5 & \dots ① \\ 3x + y = 13 & \dots ② \end{cases}$$

① $\times 1$ + ② $\times 3$ で,

$$\begin{array}{r} 2x - 3y = 5 \\ +) \quad 9x + 3y = 39 \\ \hline 11x = 44 \end{array}$$

$$x = 4$$

$x = 4$ を①に代入して,

$$2 \times 4 - 3y = 5$$

$$-3y = -3$$

$$y = 1$$

$$x = 4 \quad y = 1$$

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

① $\times 1$ - ② $\times 2$ で,

$$\begin{array}{r} 2x + 3y = 5 \\ -) \quad 2x + 4y = 8 \\ \hline -y = -3 \end{array}$$

$$y = 3$$

$y = 3$ ②に代入して,

$$x + 6 = 4$$

$$x = -2$$

$$x = -2 \quad y = 3$$

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

① $\times 3$ + ② $\times 1$ で,

$$\begin{array}{r} 9x + 3y = 15 \\ +) \quad 2x - 3y = 7 \\ \hline 11x = 22 \end{array}$$

$$x = 2$$

$x = 2$ を①に代入して,

$$3 \times 2 + y = 5$$

$$y = -1$$

$$x = 2 \quad y = -1$$

$$(4) \quad \int 4x + 3y = 9 \quad \dots ①$$

$$\begin{array}{rcl}
 \left\{ \begin{array}{l} 2x - y = 7 \quad \dots \textcircled{2} \\ 4x + 3y = 9 \end{array} \right. \\
 \textcircled{1} - \textcircled{2} \times 2 \text{ で,} \\
 \begin{array}{rcl} 4x + 3y & = & 9 \\ -) \quad 4x - 2y & = & 14 \\ \hline & 5y & = -5 \\ & y & = -1 \end{array} \\
 y = -1 \text{ を } \textcircled{2} \text{ に代入して,} \\
 \begin{array}{rcl} 2x + 1 & = & 7 \\ 2x & = & 6 \\ x & = & 3 \end{array} \quad x = 3 \quad y = -1
 \end{array}$$

$$\begin{array}{rcl}
 (5) \quad \left\{ \begin{array}{l} 3x + 2y = 1 \quad \dots \textcircled{1} \\ 4x - 3y = -10 \quad \dots \textcircled{2} \end{array} \right. \\
 \textcircled{1} \times 3 + \textcircled{2} \times 2 \text{ で,} \\
 \begin{array}{rcl} 9x + 6y & = & 3 \\ +) \quad 8x - 6y & = & -20 \\ \hline 17x & = & -17 \\ x & = & -1 \end{array} \\
 x = -1 \text{ を } \textcircled{1} \text{ に代入して,} \\
 \begin{array}{rcl} 3 \times -1 + 2y & = & 1 \\ 2y & = & 4 \end{array}
 \end{array}$$