

連立方程式 加減法2

NO.2

名前

/5 点

◆次の連立方程式を解きなさい

$$(1) \begin{cases} 3x + 2y = 23 \\ 5x + 2y = 29 \end{cases}$$

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

$$(3) \begin{cases} 3x - 4y = -14 \\ 4x + 5y = 2 \end{cases}$$

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

$$(5) \begin{cases} 2x + 3y = 1 \\ 4x - 9y = 17 \end{cases}$$

解答

$$(1) \begin{cases} 3x + 2y = 23 & \dots\text{①} \\ 5x + 2y = 29 & \dots\text{②} \end{cases}$$

① - ② で,

$$\begin{array}{r} 3x + 2y = 23 \\ -) 5x + 2y = 29 \\ \hline -2x = -6 \end{array}$$

$$x = 3$$

$x = 3$ を①に代入して,

$$\begin{array}{r} 3 \times 3 + 2y = 23 \\ 2y = 14 \\ y = 7 \end{array}$$

$$(x, y) = (3, 7)$$

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

① - ② $\times 3$ で,

$$\begin{array}{r} 3x + 5y = -7 \\ -) 3x - 9y = 21 \\ \hline 14y = -28 \end{array}$$

$$y = -2$$

$y = -2$ を①に代入して,

$$\begin{array}{r} 3x + 5 \times (-2) = -7 \\ 3x = 1 \\ x = 1 \end{array}$$

$$(x, y) = (1, -2)$$

$$(3) \begin{cases} 3x - 4y = -14 & \dots\text{①} \\ 4x + 5y = 2 & \dots\text{②} \end{cases}$$

① $\times 4$ - ② $\times 3$ で,

$$\begin{array}{r} 12x - 16y = -56 \\ -) 12x + 15y = 6 \\ \hline -31y = -62 \end{array}$$

$$y = 2$$

$y = 2$ を①に代入して,

$$\begin{array}{r} 3x - 4 \times 2 = -14 \\ 3x = -2 \\ x = -2 \end{array}$$

$$(x, y) = (-2, 2)$$

$$(4) \begin{cases} 2x + 3y = 7 & \dots\text{①} \\ 3x - 4y = 2 & \dots\text{②} \end{cases}$$

① × 3 - ② × 2 で,

$$\begin{array}{r} 6x + 9y = 21 \\ -) 6x - 8y = 4 \\ \hline 17y = 17 \\ y = 1 \end{array}$$

$y = 1$ を①に代入して,

$$2x + 3 \times 1 = 7 \\ x = 2$$

$$(x, y) = (2, 1)$$

$$(5) \begin{cases} 2x + 3y = 1 & \dots\text{①} \\ 4x - 9y = 17 & \dots\text{②} \end{cases}$$

① × 2 - ② で,

$$\begin{array}{r} 4x + 6y = 2 \\ -) 4x - 9y = 17 \\ \hline 15y = -15 \\ y = -1 \end{array}$$

$y = -1$ を①に代入して,

$$2x + 3 \times (-1) = 1 \\ x = 2$$

$$(x, y) = (2, -1)$$