

チェックテスト

6B

いろいろな連立方程式

得点

/ 100

1 次の連立方程式を解きなさい。 **ステップ 1**

$$\textcircled{1} \begin{cases} 4x + y = 14 \quad \dots \textcircled{1} \\ 25x - 5y = 20 \quad \dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{2} \div 5 \quad 5x - y = 4 \quad \dots \textcircled{3} \\ \textcircled{1} + \textcircled{3} \quad \quad \quad 4x + y = 14 \\ \quad \quad \quad \quad \quad +) \quad 5x - y = 4 \\ \hline \quad \quad \quad \quad \quad 9x = 18 \\ \quad \quad \quad \quad \quad x = 2 \end{array}$$

$x = 2$ を $\textcircled{1}$ に代入して
 $4 \times 2 + y = 14, y = 6$

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

$$\begin{array}{r} \textcircled{1} \text{より, } 3x - 4y = -5 \quad \dots \textcircled{3} \\ \textcircled{2} \text{より, } 4x - 5y = -7 \quad \dots \textcircled{4} \\ \textcircled{3} \times 4 - \textcircled{4} \times 3 \quad 12x - 16y = -20 \\ \quad \quad \quad \quad \quad -) \quad 12x - 15y = -21 \\ \hline \quad \quad \quad \quad \quad -y = 1 \\ \quad \quad \quad \quad \quad y = -1 \end{array}$$

$y = -1$ を $\textcircled{3}$ に代入して
 $3x - 4 \times (-1) = -5, x = -3$

2 次の連立方程式を解きなさい。 **ステップ 2**

$$\textcircled{1} \begin{cases} 2x + 3y = 8 \quad \dots \textcircled{1} \\ 3x + 2(x - y) = -18 \quad \dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{2} \text{より, } 5x - 2y = -18 \quad \dots \textcircled{3} \\ \textcircled{1} \times 2 + \textcircled{3} \times 3 \quad 4x + 6y = 16 \\ \quad \quad \quad \quad \quad +) \quad 15x - 6y = -54 \\ \hline \quad \quad \quad \quad \quad 19x = -38 \\ \quad \quad \quad \quad \quad x = -2 \end{array}$$

$x = -2$ を $\textcircled{1}$ に代入して
 $2 \times (-2) + 3y = 8, y = 4$

$$\textcircled{2} \begin{cases} 7x - 2y = 17 \quad \dots \textcircled{1} \\ 4(x + 2y) - 3y = -21 \quad \dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{2} \text{より, } 4x + 5y = -21 \quad \dots \textcircled{3} \\ \textcircled{1} \times 5 + \textcircled{3} \times 2 \quad 35x - 10y = 85 \\ \quad \quad \quad \quad \quad +) \quad 8x + 10y = -42 \\ \hline \quad \quad \quad \quad \quad 43x = 43 \\ \quad \quad \quad \quad \quad x = 1 \end{array}$$

$x = 1$ を $\textcircled{1}$ に代入して
 $7 \times 1 - 2y = 17, y = -5$

3 次の連立方程式を解きなさい。 **ステップ 3**

$$\textcircled{1} \begin{cases} 1.2x - 0.7y = 2.2 \quad \dots \textcircled{1} \\ 0.4x + 0.7y = 2.6 \quad \dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \times 10 \quad 12x - 7y = 22 \quad \dots \textcircled{3} \\ \textcircled{2} \times 10 \quad 4x + 7y = 26 \quad \dots \textcircled{4} \\ \textcircled{3} + \textcircled{4} \quad \quad \quad 12x - 7y = 22 \\ \quad \quad \quad \quad \quad +) \quad 4x + 7y = 26 \\ \hline \quad \quad \quad \quad \quad 16x = 48 \\ \quad \quad \quad \quad \quad x = 3 \end{array}$$

$x = 3$ を $\textcircled{3}$ に代入して
 $12 \times 3 - 7y = 22, y = 2$

$$\textcircled{2} \begin{cases} 0.2x - 0.5y = 1.3 \quad \dots \textcircled{1} \\ 0.3x + 0.4y = 0.8 \quad \dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \times 10 \quad 2x - 5y = 13 \quad \dots \textcircled{3} \\ \textcircled{2} \times 10 \quad 3x + 4y = 8 \quad \dots \textcircled{4} \\ \textcircled{3} \times 3 - \textcircled{4} \times 2 \quad 6x - 15y = 39 \\ \quad \quad \quad \quad \quad -) \quad 6x + 8y = 16 \\ \hline \quad \quad \quad \quad \quad -23y = 23 \\ \quad \quad \quad \quad \quad y = -1 \end{array}$$

$y = -1$ を $\textcircled{3}$ に代入して
 $2x - 5 \times (-1) = 13, x = 4$

4 次の連立方程式を解きなさい。 **ステップ 4**

$$\textcircled{1} \begin{cases} \frac{1}{2}x + \frac{5}{6}y = 2 \quad \dots \textcircled{1} \\ \frac{2}{3}x + \frac{5}{9}y = 1 \quad \dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \times 6 \quad 3x + 5y = 12 \quad \dots \textcircled{3} \\ \textcircled{2} \times 9 \quad 6x + 5y = 9 \quad \dots \textcircled{4} \\ \textcircled{3} - \textcircled{4} \quad \quad \quad 3x + 5y = 12 \\ \quad \quad \quad \quad \quad -) \quad 6x + 5y = 9 \\ \hline \quad \quad \quad \quad \quad -3x = 3 \\ \quad \quad \quad \quad \quad x = -1 \end{array}$$

$x = -1$ を $\textcircled{3}$ に代入して
 $3 \times (-1) + 5y = 12, y = 3$

$$\textcircled{2} \begin{cases} \frac{x-1}{3} - \frac{y}{2} = 2 \quad \dots \textcircled{1} \\ 3x + y = -1 \quad \dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \times 6 \quad 2(x-1) - 3y = 12 \\ \quad \quad \quad 2x - 3y = 14 \quad \dots \textcircled{3} \\ \textcircled{2} \times 3 + \textcircled{3} \quad \quad \quad 9x + 3y = -3 \\ \quad \quad \quad \quad \quad +) \quad 2x - 3y = 14 \\ \hline \quad \quad \quad \quad \quad 11x = 11 \\ \quad \quad \quad \quad \quad x = 1 \end{array}$$

$x = 1$ を $\textcircled{2}$ に代入して
 $3 \times 1 + y = -1, y = -4$

5 次の連立方程式を解きなさい。 **ステップ 5**

$$2x + y - 5 = x - y = 3x - 4y - 3$$

$$\begin{cases} 2x + y - 5 = x - y \quad \dots \textcircled{1} \\ x - y = 3x - 4y - 3 \quad \dots \textcircled{2} \end{cases}$$

$$\begin{array}{r} \textcircled{1} \text{より, } x + 2y = 5 \quad \dots \textcircled{3} \\ \textcircled{2} \text{より, } 2x - 3y = 3 \quad \dots \textcircled{4} \\ \textcircled{3} \times 2 - \textcircled{4} \quad 2x + 4y = 10 \\ \quad \quad \quad -) \quad 2x - 3y = 3 \\ \hline \quad \quad \quad \quad \quad 7y = 7 \\ \quad \quad \quad \quad \quad y = 1 \end{array}$$

$y = 1$ を $\textcircled{3}$ に代入して
 $x + 2 \times 1 = 5, x = 3$

1 10点×2

$\textcircled{1} (x, y) = (2 , 6)$

$\textcircled{2} (x, y) = (-3 , -1)$

2 10点×2

$\textcircled{1} (x, y) = (-2 , 4)$

$\textcircled{2} (x, y) = (1 , -5)$

3 10点×2

$\textcircled{1} (x, y) = (3 , 2)$

$\textcircled{2} (x, y) = (4 , -1)$

4 10点×2

$\textcircled{1} (x, y) = (-1 , 3)$

$\textcircled{2} (x, y) = (1 , -4)$

5 20点

$(x, y) = (3 , 1)$