

<中2分野 計算プリントNo.14 解答> 連立方程式 ④

氏名 ( ) 点数 \_\_\_\_\_

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

[解] ①より、 $-x - 2y + 6 = 5$   
 $-x - 2y = -1 \cdots ③$

$$\begin{array}{r} (2) \\ (3) + \\ \hline 3y = -4 \end{array}$$

$$y = -\frac{4}{3} \cdots ④$$

④を②に代入して、 $x = \frac{11}{3}$

$$\text{(答)} \begin{cases} x = \frac{11}{3} \\ y = -\frac{4}{3} \end{cases}$$

$$(3) \begin{cases} \frac{x}{3} + y = 2 \cdots ① \\ y - \frac{x-1}{2} = 0 \cdots ② \end{cases}$$

[解] ①を3倍して、 $x + 3y = 6 \cdots ③$   
 ②を2倍し整理して、 $-x + 2y = -1 \cdots ④$

$$\begin{array}{r} (3) \\ (4) + \\ \hline 5y = 5 \end{array}$$

$$y = 1 \cdots ⑤$$

⑤を③に代入して、 $x = 3$

$$\text{(答)} \begin{cases} x = 3 \\ y = 1 \end{cases}$$

$$(5) \begin{cases} \frac{x-2}{4} - \frac{y-4}{6} = 1 \cdots ① \\ 0.1(x+2) - 0.3y = -1 \cdots ② \end{cases}$$

[解] ①を12倍し整理して、 $3x - 2y = 10 \cdots ③$   
 ②を10倍し整理して、 $x - 3y = -12 \cdots ④$

$$\begin{array}{r} (3) \\ (4) \times 3 \\ \hline 7y = 46 \end{array}$$

$$y = \frac{46}{7} \cdots ⑤$$

⑤を④に代入して、 $x = \frac{54}{7}$

$$\text{(答)} \begin{cases} x = \frac{54}{7} \\ y = \frac{46}{7} \end{cases}$$

$$(7) 4x - y - 12 = 5x + 4y - 1 = 7$$

(A) (B) (C)

[解]  $\begin{cases} 4x - y = 19 \cdots ① ((A) = (C)) \\ 5x + 4y = 8 \cdots ② ((B) = (C)) \end{cases}$

$$\begin{array}{r} (1) \times 4 \\ (2) + \\ \hline 21x = 84 \end{array}$$

$$x = 4 \cdots ③$$

③を①に代入して、 $y = -3$

$$\text{(答)} \begin{cases} x = 4 \\ y = -3 \end{cases}$$

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

[解] ①より、 $4x - 3x - 6y = 8 \rightarrow x - 6y = 8 \cdots ③$   
 ②より、 $4x + 2y - 3x + 3 = 3 \rightarrow x + 2y = 0 \cdots ④$

$$\begin{array}{r} (3) \\ (4) - \\ \hline -8y = 8 \end{array}$$

$$y = -1 \cdots ⑤$$

⑤を③に代入して、 $x = 2$

$$\text{(答)} \begin{cases} x = 2 \\ y = -1 \end{cases}$$

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

[解] ①を10倍して、 $x - 3y = 10 \cdots ③$   
 ②を3倍し整理して、 $6x - y = 26 \cdots ④$

$$\begin{array}{r} (3) \times 6 \\ (4) - \\ \hline -17y = 34 \end{array}$$

$$y = -2 \cdots ⑤$$

⑤を③に代入して、 $x = 4$

$$\text{(答)} \begin{cases} x = 4 \\ y = -2 \end{cases}$$

$$(6) \begin{cases} 2(0.2x - 0.3) - y = 1 \cdots ① \\ \frac{x}{3} - \frac{y-5}{2} = 2 \cdots ② \end{cases}$$

[解] ①を10倍し整理して、 $4x - 10y = 16 \cdots ③$   
 ②を6倍し整理して、 $2x - 3y = -3 \cdots ④$

$$\begin{array}{r} (3) \\ (4) \times 2 \\ \hline -4y = 22 \end{array}$$

$$y = -\frac{11}{2} \cdots ⑤$$

⑤を③に代入して、 $x = -\frac{39}{4}$

$$\text{(答)} \begin{cases} x = -\frac{39}{4} \\ y = -\frac{11}{2} \end{cases}$$

$$(8) \frac{3x-1}{5} - y = \frac{3x-6y}{2} = 2x + y$$

[解] (A) = (C)  $3x - 1 - 5y = 10x + 5y$   
 $-7x - 10y = 1 \cdots ①$   
 (B) = (C)  $3x - 6y = 4x + 2y$   
 $-x - 8y = 0 \cdots ②$   
 (1)  $-7x - 10y = 1$   
 (2)  $\times 7 - 7x - 56y = 0$   
 $46y = 1$   
 $y = \frac{1}{46} \cdots ③$

③を②に代入して、 $x = -\frac{4}{23}$

$$\text{(答)} \begin{cases} x = -\frac{4}{23} \\ y = \frac{1}{46} \end{cases}$$