

<中2分野 計算プリントNo.13 解答> 連立方程式 ③

氏名 () 点数 _____

$$(1) \begin{cases} 3x - 2(y-3) = 14 \cdots ① \\ 2x + 5y = -1 \cdots ② \end{cases}$$

[解] ①より、 $3x - 2y + 6 = 14$
 $3x - 2y = 8 \cdots ③$

$$\begin{array}{r} (② \times 3) \quad 6x + 15y = -3 \\ (③ \times 2) - \quad 6x - 4y = 16 \\ \hline 19y = -19 \\ y = -1 \cdots ④ \end{array}$$

④を②に代入して、 $x = 2$
(答) $\begin{cases} x = 2 \\ y = -1 \end{cases}$

$$(3) \begin{cases} \frac{x}{5} + \frac{y}{2} = -2 \cdots ① \\ \frac{x}{3} - \frac{y}{4} = \frac{19}{6} \cdots ② \end{cases}$$

[解] ①を10倍して、 $2x + 5y = -20 \cdots ③$
②を12倍して、 $4x - 3y = 38 \cdots ④$
 $(③ \times 2) \quad 4x + 10y = -40$
 $(④) - \quad 4x - 3y = 38$
 $\hline 13y = -78$
 $y = -6 \cdots ⑤$

⑤を③に代入して、 $x = 5$
(答) $\begin{cases} x = 5 \\ y = -6 \end{cases}$

$$(5) \begin{cases} x - \frac{y-2}{3} = 4 \cdots ① \\ 0.1x - 0.2y = 1 \cdots ② \end{cases}$$

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

$$\begin{array}{r} (③) \quad 3x - y = 10 \\ (④ \times 3) - 3x - 6y = 30 \\ \hline 5y = -20 \\ y = -4 \cdots ⑤ \end{array}$$

⑤を④に代入して、 $x = 2$
(答) $\begin{cases} x = 2 \\ y = -4 \end{cases}$

$$(7) x - 2y = 3x + 4y = 10$$

(A) (B) (C)

[解] $\begin{cases} x - 2y = 10 \cdots ① ((A) = (C)) \\ 3x + 4y = 10 \cdots ② ((B) = (C)) \end{cases}$

$$\begin{array}{r} (① \times 3) \quad 3x - 6y = 30 \\ (②) - 3x + 4y = 10 \\ \hline -10y = 20 \\ y = -2 \cdots ③ \end{array}$$

③を①に代入して、 $x = 6$
(答) $\begin{cases} x = 6 \\ y = -2 \end{cases}$

$$(2) \begin{cases} 4x - (x+2y) = -9 \cdots ① \\ 3(2x-y) - 3x = -12 \cdots ② \end{cases}$$

[解] ①より、 $4x - x - 2y = -9 \rightarrow 3x - 2y = -9 \cdots ③$
②より、 $6x - 3y - 3x = -12 \rightarrow 3x - 3y = -12 \cdots ④$

$$\begin{array}{r} (③) \quad 3x - 2y = -9 \\ (④) - 3x - 3y = -12 \\ \hline y = 3 \cdots ⑤ \end{array}$$

⑤を③に代入して、 $x = -1$
(答) $\begin{cases} x = -1 \\ y = 3 \end{cases}$

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

[解] ①を4倍して、 $3x - y = 20 \cdots ③$
②を3倍して、 $2x + y = 15 \cdots ④$
 $(③) \quad 3x - y = 20$
 $(④) + 2x + y = 15$
 $\hline 5x = 35$
 $x = 7 \cdots ⑤$

⑤を④に代入して、 $y = 1$
(答) $\begin{cases} x = 7 \\ y = 1 \end{cases}$

$$(6) \begin{cases} 0.4x - 0.7y = -0.2 \cdots ① \\ \frac{x}{3} + \frac{y}{2} = 2 \cdots ② \end{cases}$$

[解] ①を10倍して、 $4x - 7y = -2 \cdots ③$
②を6倍して、 $2x + 3y = 12 \cdots ④$

$$\begin{array}{r} (③) \quad 4x - 7y = -2 \\ (④ \times 2) - 4x + 6y = 24 \\ \hline -13y = -26 \\ y = 2 \cdots ⑤ \end{array}$$

⑤を③に代入して、 $x = 3$
(答) $\begin{cases} x = 3 \\ y = 2 \end{cases}$

$$(8) 2x + 5y - 2 = 3x - 4y = 4x + y - 5$$

(A) (B) (C)

[解] (A) = (B) $2x + 5y - 2 = 3x - 4y$
 $-x + 9y = 2 \cdots ①$

(B) = (C) $3x - 4y = 4x + y - 5$
 $-x - 5y = -5 \cdots ②$

$$\begin{array}{r} (①) \quad -x + 9y = 2 \\ (②) - -x - 5y = -5 \\ \hline 14y = 7 \\ y = \frac{1}{2} \cdots ③ \end{array}$$

③を①に代入して、 $x = \frac{5}{2}$

$$\begin{cases} x = \frac{5}{2} \\ y = \frac{1}{2} \end{cases}$$

(答) $\begin{cases} x = \frac{5}{2} \\ y = \frac{1}{2} \end{cases}$