

【中2数学 | 連立方程式】

次の連立方程式を解きなさい。

- (1)
$$\begin{cases} 0.4x + 0.3y = 0.7 & \dots \textcircled{1} \\ 3x + \frac{7}{2}y = 4 & \dots \textcircled{2} \end{cases}$$

$$\begin{cases} \textcircled{1} \times 10 \text{ より} \\ 4x + 3y = 7 & \dots \textcircled{1}' \\ \textcircled{2} \times 2 \text{ より} \\ 6x + 7y = 8 & \dots \textcircled{2}' \end{cases}$$

$$\begin{cases} \textcircled{1}' \times 3 - \textcircled{2}' \times 2 \text{ より} \\ -5y = 5 \therefore y = -1 \\ \textcircled{1}' \text{に代入} \\ 4x - 3 = 7 \therefore x = \frac{5}{2} \end{cases}$$

《都立白鷗》
- (2)
$$\begin{cases} 0.5x - 0.3y = 1.9 & \dots \textcircled{1} \\ \frac{2}{3}x + y = 10 & \dots \textcircled{2} \end{cases}$$

$$\begin{cases} \textcircled{1} \times 10 \text{ より} \\ 5x - 3y = 19 & \dots \textcircled{1}' \\ \textcircled{2} \times 3 \text{ より} \\ 2x + 3y = 30 & \dots \textcircled{2}' \end{cases}$$

$$\begin{cases} \textcircled{1}' + \textcircled{2}' \text{ より} \\ 7x = 49 \therefore x = 7 \\ \textcircled{2}' \text{に代入} \\ 14 + 3y = 30 \therefore y = \frac{16}{3} \end{cases}$$

《法政二》
- (3)
$$\begin{cases} 0.2x - 0.5y = -1 & \dots \textcircled{1} \\ \frac{1}{5}x + \frac{3}{4}y = 4 & \dots \textcircled{2} \end{cases}$$

$$\begin{cases} \textcircled{1} \times 10 \text{ より} \\ 2x - 5y = -10 & \dots \textcircled{1}' \\ \textcircled{2} \times 20 \text{ より} \\ 4x + 15y = 80 & \dots \textcircled{2}' \end{cases}$$

$$\begin{cases} \textcircled{1}' \times 3 + \textcircled{2}' \text{ より} \\ 10x = 50 \therefore x = 5 \\ \textcircled{1}' \text{に代入} \\ 10 - 5y = -10 \therefore y = 4 \end{cases}$$

《西大和学園》
- (4)
$$\begin{cases} 0.1x = \frac{y}{20} + 0.5 & \dots \textcircled{1} \\ 3x + y = \frac{5}{2} & \dots \textcircled{2} \end{cases}$$

$$\begin{cases} \textcircled{1} \times 20 \text{ より} \\ 2x = y + 10 & \dots \textcircled{1}' \\ \textcircled{2} \times 2 \text{ より} \\ 6x + 2y = 5 & \dots \textcircled{2}' \end{cases}$$

$$\begin{cases} \textcircled{1}' \text{より } y = 2x - 10 \dots \textcircled{1}'' \\ \textcircled{2}' \text{に代入} \\ 6x + 2(2x - 10) = 5 \\ \therefore x = \frac{5}{2} \\ \textcircled{1}'' \text{より } y = -5 \end{cases}$$

《川越東》
- (5)
$$\begin{cases} \frac{1}{6}x - \frac{2}{3}(y + 5) = 0 & \dots \textcircled{1} \\ 0.3(1 - x) + 0.1y = 2 & \dots \textcircled{2} \end{cases}$$

$$\begin{cases} \textcircled{1} \times 6 \text{ より} \\ x - 4(y + 5) = 0 \\ x - 4y = 20 & \dots \textcircled{1}' \\ \textcircled{2} \times 10 \text{ より} \\ 3(1 - x) + y = 20 \\ -3x + y = 17 & \dots \textcircled{2}' \end{cases}$$

$$\begin{cases} \textcircled{1}' \times 3 + \textcircled{2}' \text{ より} \\ -11y = 77 \therefore y = -7 \\ \textcircled{2}' \text{に代入} \\ -3x - 7 = 17 \\ \therefore x = -8 \end{cases}$$

《京都女子》
- (6)
$$\begin{cases} \frac{1}{3}(x - 5) = \frac{1}{4}(7 - y) & \dots \textcircled{1} \\ 0.3x + 0.4y = 3.6 & \dots \textcircled{2} \end{cases}$$

$$\begin{cases} \textcircled{1} \times 12 \text{ より} \\ 4(x - 5) = 3(7 - y) \\ 4x + 3y = 41 & \dots \textcircled{1}' \\ \textcircled{2} \times 10 \text{ より} \\ 3x + 4y = 36 & \dots \textcircled{2}' \end{cases}$$

$$\begin{cases} \textcircled{1}' \times 3 - \textcircled{2}' \times 4 \text{ より} \\ -7y = -21 \therefore y = 3 \\ \textcircled{1}' \text{に代入} \\ 4x + 9 = 41 \therefore x = 8 \end{cases}$$

《ラ・サール》

YouTubeチャンネルも見てね▶ 『ふじわら塾長』で検索!!

