

1次方程式

年 組 名前

/14

■ 次の方程式を解きなさい。

① $-\frac{1}{2}x + \frac{1}{2} = \frac{1}{16} - \frac{3}{16}x$

② $\frac{5}{18}x + \frac{1}{3} = \frac{1}{6} + \frac{2}{3}x$

③ $-2y + \frac{1}{3} = \frac{2}{3} + \frac{5}{9}y$

④ $\frac{1}{2}x - \frac{1}{4} = -\frac{3}{4} + \frac{3}{4}x$

⑤ $\frac{7}{9}x + \frac{1}{2} = -\frac{1}{2} + \frac{1}{2}x$

⑥ $-\frac{2}{3}x + \frac{2}{3} = -\frac{1}{3} - 2x$

⑦ $-\frac{2}{7}x - \frac{4}{7} = \frac{2}{7} + 2x$

⑧ $-\frac{5}{8}y + \frac{1}{8} = -\frac{1}{8} + \frac{1}{4}y$

⑨ $\frac{1}{4}m - \frac{1}{16} = \frac{1}{8} - \frac{5}{8}m$

⑩ $\frac{3}{4} + \frac{1}{2}b = \frac{1}{2} - \frac{1}{2}b$

⑪ $-\frac{1}{3} - \frac{1}{2}y = -\frac{5}{6} + \frac{7}{18}y$

⑫ $-\frac{1}{4}x - \frac{3}{4} = \frac{1}{4} - \frac{1}{16}x$

⑬ $\frac{1}{6}x - \frac{5}{6} = -\frac{5}{18} - \frac{5}{18}x$

⑭ $\frac{1}{5}t + \frac{3}{5} = -\frac{1}{5} - \frac{1}{3}t$

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■ 次の方程式を解きなさい。

$$\textcircled{1} \quad -\frac{1}{2}x + \frac{1}{2} = \frac{1}{16} - \frac{3}{16}x$$

両辺に 16 をかけて

$$\begin{aligned} -8x + 8 &= 1 - 3x \\ -5x &= -7 \end{aligned}$$

$$x = \frac{7}{5}$$

$$\textcircled{2} \quad \frac{5}{18}x + \frac{1}{3} = \frac{1}{6} + \frac{2}{3}x$$

両辺に 18 をかけて

$$\begin{aligned} 5x + 6 &= 3 + 12x \\ -7x &= -3 \end{aligned}$$

$$x = \frac{3}{7}$$

$$\textcircled{3} \quad -2y + \frac{1}{3} = \frac{2}{3} + \frac{5}{9}y$$

両辺に 9 をかけて

$$\begin{aligned} -18y + 3 &= 6 + 5y \\ -23y &= 3 \end{aligned}$$

$$y = -\frac{3}{23}$$

$$\textcircled{4} \quad \frac{1}{2}x - \frac{1}{4} = -\frac{3}{4} + \frac{3}{4}x$$

両辺に 4 をかけて

$$\begin{aligned} 2x - 1 &= -3 + 3x \\ -x &= -2 \end{aligned}$$

$$x = 2$$

$$\textcircled{5} \quad \frac{7}{9}x + \frac{1}{2} = -\frac{1}{2} + \frac{1}{2}x$$

両辺に 18 をかけて

$$\begin{aligned} 14x + 9 &= -9 + 9x \\ 5x &= -18 \end{aligned}$$

$$x = -\frac{18}{5}$$

$$\textcircled{6} \quad -\frac{2}{3}x + \frac{2}{3} = -\frac{1}{3} - 2x$$

両辺に 3 をかけて

$$\begin{aligned} -2x + 2 &= -1 - 6x \\ 4x &= -3 \end{aligned}$$

$$x = -\frac{3}{4}$$

$$\textcircled{7} \quad -\frac{2}{7}x - \frac{4}{7} = \frac{2}{7} + 2x$$

両辺に 7 をかけて

$$\begin{aligned} -2x - 4 &= 2 + 14x \\ -16x &= 6 \end{aligned}$$

$$x = -\frac{3}{8}$$

$$\textcircled{8} \quad -\frac{5}{8}y + \frac{1}{8} = -\frac{1}{8} + \frac{1}{4}y$$

両辺に 8 をかけて

$$\begin{aligned} -5y + 1 &= -1 + 2y \\ -7y &= -2 \end{aligned}$$

$$y = \frac{2}{7}$$

$$\textcircled{9} \quad \frac{1}{4}m - \frac{1}{16} = \frac{1}{8} - \frac{5}{8}m$$

両辺に 16 をかけて

$$\begin{aligned} 4m - 1 &= 2 - 10m \\ 14m &= 3 \end{aligned}$$

$$m = \frac{3}{14}$$

$$\textcircled{10} \quad \frac{3}{4} + \frac{1}{2}b = \frac{1}{2} - \frac{1}{2}b$$

両辺に 4 をかけて

$$\begin{aligned} 3 + 2b &= 2 - 2b \\ 4b &= -1 \end{aligned}$$

$$b = -\frac{1}{4}$$

$$\textcircled{11} \quad -\frac{1}{3} - \frac{1}{2}y = -\frac{5}{6} + \frac{7}{18}y$$

両辺に 18 をかけて

$$\begin{aligned} -6 - 9y &= -15 + 7y \\ -16y &= -9 \end{aligned}$$

$$y = \frac{9}{16}$$

$$\textcircled{12} \quad -\frac{1}{4}x - \frac{3}{4} = \frac{1}{4} - \frac{1}{16}x$$

両辺に 16 をかけて

$$\begin{aligned} -4x - 12 &= 4 - x \\ -3x &= 16 \end{aligned}$$

$$x = -\frac{16}{3}$$

$$\textcircled{13} \quad \frac{1}{6}x - \frac{5}{6} = -\frac{5}{18} - \frac{5}{18}x$$

両辺に 18 をかけて

$$\begin{aligned} 3x - 15 &= -5 - 5x \\ 8x &= 10 \end{aligned}$$

$$x = \frac{5}{4}$$

$$\textcircled{14} \quad \frac{1}{5}t + \frac{3}{5} = -\frac{1}{5} - \frac{1}{3}t$$

両辺に 15 をかけて

$$\begin{aligned} 3t + 9 &= -3 - 5t \\ 8t &= -12 \end{aligned}$$

$$t = -\frac{3}{2}$$