

1次方程式

年 組 名前

/14

■ 次の方程式を解きなさい。

① $\frac{1}{2}x + \frac{8}{9} = \frac{4}{9} + \frac{1}{9}x$

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

③ $-2x - \frac{6}{7} = -2 + \frac{6}{7}x$

④ $\frac{5}{6}b - \frac{1}{2} = \frac{1}{3} + \frac{2}{3}b$

⑤ $\frac{9}{10}s + \frac{3}{5} = -\frac{9}{10} + \frac{1}{2}s$

⑥ $-\frac{2}{3}x - \frac{1}{6} = \frac{7}{9} - \frac{1}{2}x$

⑦ $\frac{7}{8}x + \frac{3}{4} = -\frac{3}{8} - \frac{1}{8}x$

⑧ $2a + \frac{5}{6} = -\frac{5}{6} - \frac{1}{2}a$

⑨ $-\frac{1}{2}x - \frac{1}{18} = \frac{7}{18} + \frac{1}{2}x$

⑩ $-\frac{1}{3} + \frac{2}{3}y = -\frac{2}{3} - \frac{5}{9}y$

⑪ $\frac{5}{9} - \frac{1}{18}x = \frac{1}{3} + \frac{1}{2}x$

⑫ $-\frac{3}{16}m + \frac{7}{16} = \frac{1}{2} - \frac{1}{4}m$

⑬ $\frac{1}{18}y - \frac{2}{3} = -\frac{1}{3} + \frac{1}{2}y$

⑭ $-\frac{1}{2}m + \frac{1}{2} = -\frac{1}{2} - \frac{7}{18}m$

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■ 次の方程式を解きなさい。

$$\textcircled{1} \quad \frac{1}{2}x + \frac{8}{9} = \frac{4}{9} + \frac{1}{9}x$$

両辺に 18 をかけて

$$\begin{aligned} 9x + 16 &= 8 + 2x \\ 7x &= -8 \end{aligned}$$

$$x = -\frac{8}{7}$$

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

両辺に 6 をかけて

$$\begin{aligned} -3x + 2 &= -4 + 2x \\ -5x &= -6 \end{aligned}$$

$$x = \frac{6}{5}$$

$$\textcircled{3} \quad -2x - \frac{6}{7} = -2 + \frac{6}{7}x$$

両辺に 7 をかけて

$$\begin{aligned} -14x - 6 &= -14 + 6x \\ -20x &= -8 \end{aligned}$$

$$x = \frac{2}{5}$$

$$\textcircled{4} \quad \frac{5}{6}b - \frac{1}{2} = \frac{1}{3} + \frac{2}{3}b$$

両辺に 6 をかけて

$$\begin{aligned} 5b - 3 &= 2 + 4b \\ b &= 5 \end{aligned}$$

$$b = 5$$

$$\textcircled{5} \quad \frac{9}{10}s + \frac{3}{5} = -\frac{9}{10} + \frac{1}{2}s$$

両辺に 10 をかけて

$$\begin{aligned} 9s + 6 &= -9 + 5s \\ 4s &= -15 \end{aligned}$$

$$s = -\frac{15}{4}$$

$$\textcircled{6} \quad -\frac{2}{3}x - \frac{1}{6} = \frac{7}{9} - \frac{1}{2}x$$

両辺に 18 をかけて

$$\begin{aligned} -12x - 3 &= 14 - 9x \\ -3x &= 17 \end{aligned}$$

$$x = -\frac{17}{3}$$

$$\textcircled{7} \quad \frac{7}{8}x + \frac{3}{4} = -\frac{3}{8} - \frac{1}{8}x$$

両辺に 8 をかけて

$$\begin{aligned} 7x + 6 &= -3 - x \\ 8x &= -9 \end{aligned}$$

$$x = -\frac{9}{8}$$

$$\textcircled{8} \quad 2a + \frac{5}{6} = -\frac{5}{6} - \frac{1}{2}a$$

両辺に 6 をかけて

$$\begin{aligned} 12a + 5 &= -5 - 3a \\ 15a &= -10 \end{aligned}$$

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

$$\textcircled{9} \quad -\frac{1}{2}x - \frac{1}{18} = \frac{7}{18} + \frac{1}{2}x$$

両辺に 18 をかけて

$$\begin{aligned} -9x - 1 &= 7 + 9x \\ -18x &= 8 \end{aligned}$$

$$x = -\frac{4}{9}$$

$$\textcircled{10} \quad -\frac{1}{3} + \frac{2}{3}y = -\frac{2}{3} - \frac{5}{9}y$$

両辺に 9 をかけて

$$\begin{aligned} -3 + 6y &= -6 - 5y \\ 11y &= -3 \end{aligned}$$

$$y = -\frac{3}{11}$$

$$\textcircled{11} \quad \frac{5}{9} - \frac{1}{18}x = \frac{1}{3} + \frac{1}{2}x$$

両辺に 18 をかけて

$$\begin{aligned} 10 - x &= 6 + 9x \\ -10x &= -4 \end{aligned}$$

$$x = \frac{2}{5}$$

$$\textcircled{12} \quad -\frac{3}{16}m + \frac{7}{16} = \frac{1}{2} - \frac{1}{4}m$$

両辺に 16 をかけて

$$\begin{aligned} -3m + 7 &= 8 - 4m \\ m &= 1 \end{aligned}$$

$$m = 1$$

$$\textcircled{13} \quad \frac{1}{18}y - \frac{2}{3} = -\frac{1}{3} + \frac{1}{2}y$$

両辺に 18 をかけて

$$\begin{aligned} y - 12 &= -6 + 9y \\ -8y &= 6 \end{aligned}$$

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

$$\textcircled{14} \quad -\frac{1}{2}m + \frac{1}{2} = -\frac{1}{2} - \frac{7}{18}m$$

両辺に 18 をかけて

$$\begin{aligned} -9m + 9 &= -9 - 7m \\ -2m &= -18 \end{aligned}$$

$$m = 9$$