

数学科 方程式マスター G-⑥

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次の方程式を解きなさい。

$$\textcircled{1} \quad -\frac{5}{8}x+4=-\frac{5}{2}x+6$$

$$\textcircled{5} \quad -x-\frac{1}{6}=-\frac{7}{4}x+2$$

$$\textcircled{2} \quad -2x+\frac{4}{5}=-\frac{4}{3}x-2$$

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

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

$$\textcircled{7} \quad -\frac{1}{5}x-2=\frac{1}{3}x-1$$

$$\textcircled{4} \quad -\frac{5}{8}x+4=\frac{1}{6}x+3$$

次の方程式を解きなさい。

① $-\frac{5}{8}x+4=-\frac{5}{2}x+6$

$$8(-\frac{5}{8}x+4)=8(-\frac{5}{2}x+6)$$

$$8 \times (-\frac{5}{8}x) + 32 = 8 \times (-\frac{5}{2}x) + 48$$

$$-5x + 32 = -20x + 48$$

$$-5x + 20x = -32 + 48$$

$$15x = 16$$

$$15x \div 15 = 16 \div 15$$

$$x = \frac{16}{15}$$

② $-2x + \frac{4}{5} = -\frac{4}{3}x - 2$

$$15(-2x + \frac{4}{5}) = 15(-\frac{4}{3}x - 2)$$

$$-30x + 15 \times \frac{4}{5} = 15 \times (-\frac{4}{3}x) - 30$$

$$-30x + 12 = -20x - 30$$

$$-30x + 20x = -12 - 30$$

$$-10x = -42$$

$$-10x \div (-10) = -42 \div (-10)$$

$$x = \frac{42}{10}$$

$$x = \frac{21}{5}$$

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

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

$$6 \times (-\frac{1}{6}x) + 6 \times (-\frac{5}{6}) = 6 \times \frac{1}{3}x + 6 \times \frac{5}{6}$$

$$-x - 5 = 2x + 5$$

$$-x - 2x = 5 + 5$$

$$-3x = 10$$

$$-3x \div (-3) = 10 \div (-3)$$

$$x = -\frac{10}{3}$$

④ $-\frac{5}{8}x + 4 = \frac{1}{6}x + 3$

$$24(-\frac{5}{8}x + 4) = 24(\frac{1}{6}x + 3)$$

$$24 \times (-\frac{5}{8}x) + 96 = 24 \times \frac{1}{6}x + 72$$

$$-15x + 96 = 4x + 72$$

$$-15x - 4x = -96 + 72$$

$$-19x = -24$$

$$-19x \div (-19) = -24 \div (-19)$$

$$x = \frac{24}{19}$$

⑤ $-x - \frac{1}{6} = -\frac{7}{4}x + 2$

$$12(-x - \frac{1}{6}) = 12(-\frac{7}{4}x + 2)$$

$$-12x + 12 \times (-\frac{1}{6}) = 12 \times (-\frac{7}{4}x) + 24$$

$$-12x - 2 = -21x + 24$$

$$-12x + 21x = 2 + 24$$

$$9x = 26$$

$$9x \div 9 = 26 \div 9$$

$$x = \frac{26}{9}$$

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

$$6(-\frac{1}{3}x - \frac{5}{6}) = 6(\frac{1}{6}x + \frac{4}{3})$$

$$6 \times (-\frac{1}{3}x) + 6 \times (-\frac{5}{6}) = 6 \times \frac{1}{6}x + 6 \times \frac{4}{3}$$

$$-2x - 5 = x + 8$$

$$-2x - x = 5 + 8$$

$$-3x = 13$$

$$-3x \div (-3) = 13 \div (-3)$$

$$x = -\frac{13}{3}$$

⑦ $-\frac{1}{5}x - 2 = \frac{1}{3}x - 1$

$$15(-\frac{1}{5}x - 2) = 15(\frac{1}{3}x - 1)$$

$$15 \times (-\frac{1}{5}x) - 30 = 15 \times \frac{1}{3}x - 15$$

$$-3x - 30 = 5x - 15$$

$$-3x - 5x = 30 - 15$$

$$-8x = 15$$

$$-8x \div (-8) = 15 \div (-8)$$

$$x = -\frac{15}{8}$$