

数学科 方程式マスター G-⑦

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次の方程式を解きなさい。

① $\frac{4}{9}x+2=-\frac{5}{6}x+3$

⑤ $x+\frac{2}{3}=-\frac{2}{9}x-2$

② $-2x+\frac{3}{4}=\frac{3}{4}x+2$

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

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

⑦ $-\frac{5}{8}x-4=\frac{1}{8}x-5$

④ $\frac{1}{5}x+2=\frac{3}{4}x+1$

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次の方程式を解きなさい。

① $\frac{4}{9}x + 2 = -\frac{5}{6}x + 3$

$18(\frac{4}{9}x + 2) = 18(-\frac{5}{6}x + 3)$

$2 \times \frac{4}{9}x + 36 = 3 \times (-\frac{5}{6}x) + 54$

$8x + 36 = -15x + 54$

$8x + 15x = -36 + 54$

$23x = 18$

$23x \div 23 = 18 \div 23$

$x = \frac{18}{23} \#$

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

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

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

$-8x + 3 = 3x + 8$

$-8x - 3x = -3 + 8$

$-11x = 5$

$-11x \div (-11) = 5 \div (-11)$

$x = -\frac{5}{11} \#$

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

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

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

$-x + 1 = -4x + 4$

$-x + 4x = -1 + 4$

$3x = 3$

$3x \div 3 = 3 \div 3$

$x = 1 \#$

④ $\frac{1}{5}x + 2 = \frac{3}{4}x + 1$

$20(\frac{1}{5}x + 2) = 20(\frac{3}{4}x + 1)$

$4 \times \frac{1}{5}x + 40 = 5 \times \frac{3}{4}x + 20$

$4x + 40 = 15x + 20$

$4x - 15x = -40 + 20$

$-11x = -20$

$-11x \div (-11) = -20 \div (-11)$

$x = \frac{20}{11} \#$

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

$9(x + \frac{2}{3}) = 9(-\frac{2}{9}x - 2)$

$9x + 9 \times \frac{2}{3} = 9 \times (-\frac{2}{9}x) - 18$

$9x + 6 = -2x - 18$

$9x + 2x = -6 - 18$

$11x = -24$

$11x \div 11 = -24 \div 11$

$x = -\frac{24}{11} \#$

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

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

$8 \times (-\frac{1}{8}x) + 8 \times (-\frac{5}{8}) = 8 \times \frac{1}{4}x + 8 \times \frac{4}{8}$

$-x - 5 = 2x + 4$

$-x - 2x = 5 + 4$

$-3x = 9$

$-3x \div (-3) = 9 \div (-3)$

$x = -3 \#$

⑦ $-\frac{5}{8}x - 4 = \frac{1}{8}x - 5$

$8(-\frac{5}{8}x - 4) = 8(\frac{1}{8}x - 5)$

$8 \times (-\frac{5}{8}x) - 32 = 8 \times \frac{1}{8}x - 40$

$-5x - 32 = x - 40$

$-5x - x = 32 - 40$

$-6x = -8$

$-6x \div (-6) = -8 \div (-6)$

$x = \frac{8}{6}$

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