

方程式の計算（小数点）

例題 次の方程式を解け。

(1) $0.3x - 0.5 = 1.5 + 0.1x$

答

(2) $1.2x + 2 = x - 0.4$

答

(5) $0.15x - 0.02 = 0.1x$

答

練習A 次の方程式を解け。

(1) $0.3x + 0.4 = 0.1x + 1$

答

(3) $0.5 + 0.2x = 0.1 + 0.3x$

答

(3) $0.3 = 0.14 - 0.08x$

答

(2) $0.5x - 0.2 = 0.4x - 0.8$

答

(4) $0.5x - 2.6 = -2 + 0.3x$

答

(6) $0.02x - 0.15 = 0.05x$

答

練習B 次の方程式を解け。

(1) $0.2x - 0.6 = 1 + 0.3x$

答

(2) $0.7x - 2.4 = 0.3x$

答

(3) $1.5 - 0.6x = 1.4x$

答

(4) $1.2x - 0.5 = 0.7x - 0.5$

答

(5) $0.2x - 1.5 = 1.7x - 2.5$

答

(6) $2.4x - 1.6 = 1.6x - 2.4$

答

(7) $0.12x - 0.5 = 1.12x$

答

(8) $0.12x + 0.08 = 0.06x$

答

(9) $0.07x - 0.48 = -0.17x$

答

方程式の計算（小数点）

例題 次の方程式を解け。

(1) $0.3x - 0.5 = 1.5 + 0.1x$

★
 $(0.3x - 0.5) \times 10 = (1.5 + 0.1x) \times 10$
 $0.3x \times 10 - 0.5 \times 10 = 1.5x \times 10 + 0.1x \times 10$
 $3x - 5 = 15 + x$
 $3x - x = 15 + 5$
 $2x = 20$
 $\frac{1}{2}x = \frac{10}{2}$
 $x = 10$

答 $x = 10$

(2) $1.2x + 2 = x - 0.4$

★
 $(1.2x + 2) \times 10 = (x - 0.4) \times 10$
 $1.2x \times 10 + 2 \times 10 = x \times 10 - 0.4 \times 10$
 $12x + 20 = 10x - 4$
 $12x - 10x = -4 - 20$
 $2x = -24$
 $\frac{1}{2}x = \frac{-24}{2}$
 $x = -12$

答 $x = -12$

(5) $0.15x - 0.02 = 0.1x$

★
 $(0.15x - 0.02) \times 100 = 0.1x \times 100$
 $0.15x \times 100 - 0.02 \times 100 = 0.1x \times 100$
 $15x - 2 = 10x$
 $15x - 10x = 2$
 $5x = 2$
 $\frac{1}{5}x = \frac{2}{5}$
 $x = \frac{2}{5}$

答 $x = \frac{2}{5}$

練習A 次の方程式を解け。

(1) $0.3x + 0.4 = 0.1x + 1$

★
 $(0.3x + 0.4) \times 10 = (0.1x + 1) \times 10$
 $0.3x \times 10 + 0.4 \times 10 = 0.1x \times 10 + 1 \times 10$
 $3x + 4 = x + 10$
 $3x - x = 10 - 4$
 $2x = 6$
 $\frac{1}{2}x = \frac{3}{2}$
 $x = 3$

答 $x = 3$

(2) $0.5x - 0.2 = 0.4x - 0.8$

★
 $(0.5x - 0.2) \times 10 = (0.4x - 0.8) \times 10$
 $0.5x \times 10 - 0.2 \times 10 = 0.4x \times 10 - 0.8 \times 10$
 $5x - 2 = 4x - 8$
 $5x - 4x = -8 + 2$
 $x = -6$

答 $x = -6$

(3) $0.5 + 0.2x = 0.1 + 0.3x$

★
 $(0.5 + 0.2x) \times 10 = (0.1 + 0.3x) \times 10$
 $0.5 \times 10 + 0.2x \times 10 = 0.1 \times 10 + 0.3x \times 10$
 $5 + 2x = 1 + 3x$
 $2x - 3x = 1 - 5$
 $-x = -4$
 $x = 4$

答 $x = 4$

(4) $0.5x - 2.6 = -2 + 0.3x$

★
 $(0.5x - 2.6) \times 10 = (-2 + 0.3x) \times 10$
 $0.5x \times 10 - 2.6 \times 10 = -2 \times 10 + 0.3x \times 10$
 $5x - 26 = -20 + 3x$
 $5x - 3x = -20 + 26$
 $2x = 6$
 $\frac{1}{2}x = \frac{3}{2}$
 $x = 3$

答 $x = 3$

(3) $0.3 = 0.14 - 0.08x$

★
 $0.3 \times 100 = (0.14 - 0.08x) \times 100$
 $0.3 \times 100 = 0.14 \times 100 - 0.08 \times 100$
 $30 = 14 - 8x$
 $8x = 14 - 30$
 $8x = -16$
 $\frac{1}{8}x = \frac{-16}{8}$
 $x = -2$

答 $x = -2$

(6) $0.02x - 0.15 = 0.05x$

★
 $(0.02x - 0.15) \times 100 = 0.05x \times 100$
 $0.02x \times 100 - 0.15 \times 100 = 0.05x \times 100$
 $2x - 15 = 5x$
 $2x - 5x = 15$
 $-3x = 15$
 $\frac{-1}{3}x = \frac{15}{-3}$
 $x = -5$

答 $x = -5$

練習B 次の方程式を解け。

(1) $0.2x - 0.6 = 1 + 0.3x$

★

$$\begin{aligned} (0.2x - 0.6) \times 10 &= (1 + 0.3x) \times 10 \\ 0.2x \times 10 - 0.6 \times 10 &= 1 \times 10 + 0.3x \times 10 \\ 2x - 6 &= 10 + 3x \\ 2x - 3x &= 10 + 6 \\ -x &= 16 \\ x &= -16 \end{aligned}$$

答 $x = -16$

(2) $0.7x - 2.4 = 0.3x$

★

$$\begin{aligned} (0.7x - 2.4) \times 10 &= 0.3x \times 10 \\ 0.7x \times 10 - 2.4 \times 10 &= 0.3x \times 10 \\ 7x - 24 &= 3x \\ 7x - 3x &= 24 \\ 4x &= 24 \\ \frac{1}{4} \frac{4x}{1} &= \frac{6}{4} \frac{24}{1} \\ x &= 6 \end{aligned}$$

答 $x = 6$

(3) $1.5 - 0.6x = 1.4x$

★

$$\begin{aligned} (1.5 - 0.6x) \times 10 &= 1.4x \times 10 \\ 1.5 \times 10 - 0.6x \times 10 &= 1.4x \times 10 \\ 15 - 6x &= 14x \\ -6x - 14x &= -15 \\ -20x &= -15 \\ \frac{-1}{20} \frac{20x}{1} &= \frac{-3}{20} \frac{15}{1} \\ x &= \frac{3}{4} \end{aligned}$$

答 $x = \frac{3}{4}$

(4) $1.2x - 0.5 = 0.7x - 0.5$

★

$$\begin{aligned} (1.2x - 0.5) \times 10 &= (0.7x - 0.5) \times 10 \\ 1.2x \times 10 - 0.5 \times 10 &= 0.7x \times 10 - 0.5 \times 10 \\ 12x - 5 &= 7x - 5 \\ 12x - 7x &= -5 + 5 \\ 5x &= 0 \\ \frac{1}{5} \frac{5x}{1} &= \frac{0}{5} \\ x &= 0 \end{aligned}$$

答 $x = 0$

(5) $0.2x - 1.5 = 1.7x - 2.5$

★

$$\begin{aligned} (0.2x - 1.5) \times 10 &= (1.7x - 2.5) \times 10 \\ 0.2x \times 10 - 1.5 \times 10 &= 1.7x \times 10 - 2.5 \times 10 \\ 2x - 15 &= 17x - 25 \\ 2x - 17x &= -25 + 15 \\ -15x &= -10 \\ \frac{-1}{15} \frac{15x}{1} &= \frac{-2}{15} \frac{10}{3} \\ x &= \frac{2}{3} \end{aligned}$$

答 $x = \frac{2}{3}$

(6) $2.4x - 1.6 = 1.6x - 2.4$

★

$$\begin{aligned} (2.4x - 1.6) \times 10 &= (1.6x - 2.4) \times 10 \\ 2.4x \times 10 - 1.6 \times 10 &= 1.6x \times 10 - 2.4 \times 10 \\ 24x - 16 &= 16x - 24 \\ 24x - 16x &= -24 + 16 \\ 8x &= -8 \\ \frac{1}{8} \frac{8x}{1} &= \frac{-1}{8} \frac{8}{1} \\ x &= -1 \end{aligned}$$

答 $x = -1$

(7) $0.12x - 0.5 = 1.12x$

★

$$\begin{aligned} (0.12x - 0.5) \times 100 &= 1.12x \times 100 \\ 0.12x \times 100 - 0.5 \times 100 &= 1.12x \times 100 \\ 12x - 50 &= 112x \\ 12x - 112x &= 50 \\ -100x &= 50 \\ \frac{-1}{100} \frac{100x}{1} &= \frac{1}{100} \frac{50}{2} \\ x &= -\frac{1}{2} \end{aligned}$$

答 $x = -\frac{1}{2}$

(8) $0.12x + 0.08 = 0.06x$

★

$$\begin{aligned} (0.12x + 0.08) \times 100 &= 0.06x \times 100 \\ 0.12x \times 100 + 0.08 \times 100 &= 0.06x \times 100 \\ 12x + 8 &= 6x \\ 12x - 6x &= -8 \\ 6x &= -8 \\ \frac{1}{6} \frac{6x}{1} &= \frac{-4}{6} \frac{8}{3} \\ x &= -\frac{4}{3} \end{aligned}$$

答 $x = -\frac{4}{3}$

(9) $0.07x - 0.48 = -0.17x$

★

$$\begin{aligned} (0.07x - 0.48) \times 100 &= -0.17x \times 100 \\ 0.07x \times 100 - 0.48 \times 100 &= -0.17x \times 100 \\ 7x - 48 &= -17x \\ 7x + 17x &= 48 \\ 24x &= 48 \\ \frac{1}{24} \frac{24x}{1} &= \frac{2}{24} \frac{48}{1} \\ x &= 2 \end{aligned}$$

答 $x = 2$