例題　次の方程式を解け。

(1)　$2x - \dfrac{5}{4} = \dfrac{x}{3}$

答

(2)　$\dfrac{1}{3}x - \dfrac{1}{2} = \dfrac{3}{4}x + \dfrac{2}{3}$

答

練習9A　次の方程式を解け。

(1)　$\dfrac{x}{5} - \dfrac{x}{3} = 2$

答

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

答

(2)　$8 - \dfrac{5}{6}x = -2$

答

(4)　$\dfrac{5}{6} - \dfrac{3}{4}x = \dfrac{2}{3} - \dfrac{1}{2}x$

答

練習B 次の方程式を解け。

(1) $\dfrac{1}{2}x - 2 = \dfrac{2}{3}$

答

(2) $\dfrac{3}{4}x - \dfrac{1}{2} = \dfrac{1}{4}x$

答

(3) $\dfrac{3}{4}x + 3 = 2x + \dfrac{1}{2}$

答

(4) $\dfrac{1}{2} + \dfrac{4}{3}x = \dfrac{2}{3} + \dfrac{3}{4}x$

答

(5) $-\dfrac{1}{2} + \dfrac{3}{4}x = \dfrac{1}{2}x - \dfrac{5}{8}$

答

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

答

方程式の計算（分数）

例題 次の方程式を解け。

(1) $2x - \dfrac{5}{4} = \dfrac{x}{3}$

★

$$2x \times 12 - \dfrac{5}{4} \times 12^{3} = \dfrac{x}{3} \times 12^{4}$$
$$24x - 15 = 4x$$
$$24x - 4x = 15$$
$$20x = 15$$
$$\dfrac{20x}{20} = \dfrac{15}{20}$$
$$x = \dfrac{3}{4}$$

答	$x = \dfrac{3}{4}$

(2) $\dfrac{1}{3}x - \dfrac{1}{2} = \dfrac{3}{4}x + \dfrac{2}{3}$

★

$$\dfrac{x}{3} \times 12^{4} - \dfrac{1}{2} \times 12^{6} = \dfrac{3}{4}x \times 12^{3} + \dfrac{2}{3} \times 12^{4}$$
$$4x - 6 = 9x + 8$$
$$4x - 9x = 8 + 6$$
$$-5x = 14$$
$$\dfrac{-5x}{-5} = \dfrac{14}{-5}$$
$$x = -\dfrac{14}{5}$$

答	$x = -\dfrac{14}{5}$

練習A 次の方程式を解け。

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

★

$$\dfrac{x}{5} \times 15^{3} - \dfrac{x}{3} \times 15^{5} = 2 \times 15$$
$$3x - 5x = 30$$
$$-2x = 30$$
$$\dfrac{-2x}{-2} = \dfrac{30}{-2}$$
$$x = -15$$

答	$x = -15$

(2) $8 - \dfrac{5}{6}x = -2$

★

$$8 \times 6 - \dfrac{5}{6}x \times 6^{1} = -2 \times 6$$
$$48 - 5x = -12$$
$$-5x = -12 - 48$$
$$\dfrac{-5x}{-5} = \dfrac{-60}{-5}$$
$$x = 12$$

答	$x = 12$

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

★

$$\dfrac{2}{3}x \times 15^{5} + \dfrac{4}{5} \times 15^{3} = \dfrac{2}{3} \times 15^{5} - \dfrac{2}{5}x \times 15^{3}$$
$$10x + 12 = 10 - 6x$$
$$10x + 6x = 10 - 12$$
$$16x = -2$$
$$\dfrac{16x}{16} = \dfrac{-2}{16}$$
$$x = -\dfrac{1}{8}$$

答	$x = -\dfrac{1}{8}$

(4) $\dfrac{5}{6} - \dfrac{3}{4}x = \dfrac{2}{3} - \dfrac{1}{2}x$

★

$$\dfrac{5}{6} \times 12^{2} - \dfrac{3}{4}x \times 12^{3} = \dfrac{2}{3} \times 12^{4} - \dfrac{1}{2}x \times 12^{6}$$
$$10 - 9x = 8 - 6x$$
$$-9x + 6x = 8 - 10$$
$$-3x = -2$$
$$\dfrac{-3x}{-3} = \dfrac{-2}{-3}$$
$$x = \dfrac{2}{3}$$

答	$x = \dfrac{2}{3}$

練習B 次の方程式を解け。

(1) $\dfrac{1}{2}x - 2 = \dfrac{2}{3}$

★

$$\dfrac{1}{2}x \times 6^{3} - 2 \times 6 = \dfrac{2}{3}x \times 6^{2}$$

$$3x - 12 = 4$$

$$3x = 4 + 12$$

$$\dfrac{3x}{3} = \dfrac{16}{3}$$

$$x = \dfrac{16}{3}$$

答	$x = \dfrac{16}{3}$

(2) $\dfrac{3}{4}x - \dfrac{1}{2} = \dfrac{1}{4}x$

★

$$\dfrac{3}{4}x \times 4^{3} - \dfrac{1}{2} \times 4^{2} = \dfrac{1}{4}x \times 4^{1}$$

$$9x - 2 = x$$

$$9x - x = 2$$

$$\dfrac{8x}{8} = \dfrac{2}{8}$$

$$x = \dfrac{1}{4}$$

答	$x = \dfrac{1}{4}$

(3) $\dfrac{3}{4}x + 3 = 2x + \dfrac{1}{2}$

★

$$\dfrac{3}{4}x \times 4^{1} + 3 \times 4 = 2x \times 4 + \dfrac{1}{2} \times 4^{2}$$

$$3x + 12 = 8x + 2$$

$$3x - 8x = 2 - 12$$

$$-5x = -10$$

$$\dfrac{-5x}{-5} = \dfrac{-10}{-5}$$

$$x = 2$$

答	$x = 2$

(4) $\dfrac{1}{2} + \dfrac{4}{3}x = \dfrac{2}{3} + \dfrac{3}{4}x$

★

$$\dfrac{1}{2} \times 12^{6} + \dfrac{4}{3}x \times 12^{4} = \dfrac{2}{3} \times 12^{4} + \dfrac{3}{4}x \times 12^{3}$$

$$6 + 16x = 8 - 9x$$

$$16x - 9x = 8 - 6$$

$$7x = 2$$

$$\dfrac{7x}{7} = \dfrac{2}{7}$$

$$x = \dfrac{2}{7}$$

答	$x = \dfrac{2}{7}$

(5) $-\dfrac{1}{2} + \dfrac{3}{4}x = \dfrac{1}{2}x - \dfrac{5}{8}$

★

$$-\dfrac{1}{2} \times 8^{4} + \dfrac{3}{4}x \times 8^{2} = \dfrac{1}{2}x \times 8^{4} - \dfrac{5}{8} \times 8^{1}$$

$$-4 + 6x = 4x - 5$$

$$6x - 4x = -5 + 4$$

$$2x = -1$$

$$\dfrac{2x}{2} = \dfrac{1}{-2}$$

$$x = -\dfrac{1}{2}$$

答	$x = -\dfrac{1}{2}$

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

★

$$-1 \times 6 - \dfrac{5}{6}x \times 6^{1} = -x \times 6 + \dfrac{1}{3} \times 6^{2}$$

$$-6 - 5x = -6x + 2$$

$$-5x + 6x = 2 + 6$$

$$x = 8$$

答	$x = 8$