

2019年 中1夏期 代数ダイジェスト テーマ1 宿題解答

H1.1

$$(1) -13x - 7 = 84$$

$$-13x = 84 + 7$$

$$-13x = 91$$

$$x = 91 \times \left(-\frac{1}{13} \right)$$

$$\boxed{x = -7}$$

$$(2) 4x - 7 = 8 - 2x$$

$$4x + 2x = 8 + 7$$

$$6x = 15$$

$$x = 15 \times \frac{1}{6}$$

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

$$(3) -3 - 4a = a + 7$$

$$-4a - a = 7 + 3$$

$$-5a = 10$$

$$a = 10 \times \left(-\frac{1}{5} \right)$$

$$\boxed{a = -2}$$

$$(4) \frac{1}{3}x - 4 = \frac{8}{3} - \frac{1}{2}x$$

$$\frac{1}{3}x + \frac{1}{2}x = \frac{8}{3} + 4$$

$$\frac{5}{6}x = \frac{20}{3}$$

$$x = \frac{20}{3} \times \frac{6}{5}$$

$$\boxed{x = 8}$$

H1.2

$$(1) \frac{x+1}{3} + 2 = \frac{x}{6} - \frac{3x-2}{4}$$

$$\frac{4 \times (x+1) + 12 \times 2}{12} = \frac{2 \times x - 3 \times (3x-2)}{12}$$

両辺を12倍して、

$$4(x+1) + 24 = 2x - 3(3x-2)$$

$$4x + 4 + 24 = 2x - 9x + 6$$

$$4x + 28 = -7x + 6$$

$$4x + 7x = 6 - 28$$

$$11x = -22$$

$$\boxed{x = -2}$$

$$(2) 0.5(x-2) = 1.4 + 0.2x$$

両辺を10倍して、

$$10 \times 0.5 \times (x-2) = 10 \times (1.4 + 0.2x)$$

$$5(x-2) = 14 + 2x$$

$$5x - 10 = 14 + 2x$$

$$5x - 2x = 14 + 10$$

$$3x = 24$$

$$\boxed{x = 8}$$

H1.3

$ax - 7 = a - x$ に $x = -2$ を代入して、 $a \times (-2) - 7 = a - (-2)$

$$-2a - 7 = a + 2$$

$$-2a - a = 2 + 7$$

$$-3a = 9$$

$$a = -3$$

H1.4

長椅子の脚数を x として、生徒の人数に注目して方程式を立てると、

$$3x + 76 = 4x - 23$$

$$3x - 4x = -23 - 76$$

$$-x = -99$$

$$x = 99$$

よって、生徒の人数は、 $3x + 76$ (または $4x - 23$) に $x = 99$ を代入して、

$$3 \times 99 + 76 = 3 \times (100 - 1) + 76$$

$$= 300 - 3 + 76 = 373 \text{ 人}$$