

$$1. (1) \quad \text{時間} = \frac{\text{距離}}{\text{速度}} \quad \text{より} \quad y = \frac{4}{x}$$

$$(2) \quad \text{男子の身長}の合計 = 4a \text{ cm} \quad \text{人数}の合計 = 4 + 3 = 7 \text{ 人}$$

$$\text{女子の身長}の合計 = 3b \text{ cm} \quad \text{グループ全員}の身長の平均 = \frac{4a + 3b}{7} \text{ cm}$$

$$2. (1) \quad (5a + 2b) - 3(2a - b) = 5a + 2b - 6a + 3b = -a + 5b$$

$$(2) \quad 16x^2 y \div 4xy \times (-2y) = 4x \times (-2y) = -8xy$$

$$(3) \quad 4\left(a - \frac{b}{2}\right) + \frac{a + 6b}{3} = 4a - 2b + \frac{a}{3} + 2b = \frac{12a}{3} + \frac{a}{3} = \frac{13a}{3}$$

$$(4) \quad (-14a^2 b) \div \left(-\frac{7}{8}ab\right) = 14a^2 b \times \frac{8}{7ab} = 16a$$

$$3. (1) \quad x^2 - 2xy + y^2 = (x - y)^2 = \left(-1 - \frac{1}{2}\right)^2 = \left(-\frac{3}{2}\right)^2 = \frac{9}{4}$$

$$(2) \quad A - 2B = 5x - 4y - 2(x - 2y) = 5x - 4y - 2x + 4y = 3x$$

$$4. (1) \quad (a + b)h = 2S \quad a + b = \frac{2S}{h} \quad a = \frac{2S}{h} - b$$

$$(2) \quad \frac{5}{9}c = \frac{2}{9}a - J \quad c = \frac{9}{5}\left(\frac{2}{9}a - J\right) = \frac{2}{5}a - \frac{9}{5}J$$

$$(3) \quad \frac{9}{5}C = F - 32 \quad C = \frac{5}{9}(F - 32) = \frac{5}{9}F - \frac{160}{9}$$

5. (1) $2(3a - 5b) - 4(a - 2b) = 6a - 10b - 4a + 8b = 2a - 2b$
 $= 2 \times \frac{1}{2} - 2 \times (-4) = 1 - (-8) = 1 + 8 = 9$

(2) 7で割ったとき3余る数と, 7で割ったとき4余る数は, 整数を表す数 m, n を用いてそれぞれ

$7m + 3$, $7n + 4$ と表すことができる。よってその和は

$$7m + 3 + 7n + 4 = 7m + 7n + 7 = 7(m + n + 1) = 7 \times \text{整数}$$

よって7の倍数である。

(3) 求める式を A とすると

$$3(2x + 7) - A = x + 41y$$

$$A = 3(2x + 7y) - x - 41y = 6x + 21y - x - 41y = 5x - 20y$$

(4) $300 \times \frac{a}{100} = 3a$ (g)

6. (1) (ア) $7m$ (イ) $35m^2$ (ウ) 24 (本)

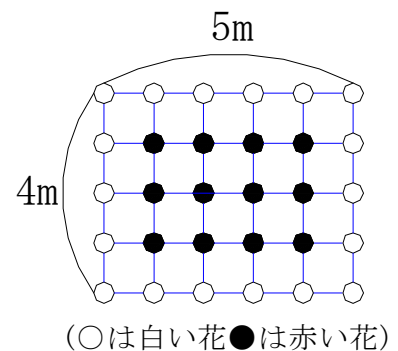
(2) ① $W = (a + 1) \times 2 + (b - 1) \times 2 = 2a + 2b = 2(a + b)$

② $S = ab$

$$R = (a - 1)(b - 1)$$

$$= ab - (a + b) + 1$$

$$= S - \frac{W}{2} + 1$$



	たて(m)	よこ(m)	花壇の面積(m ²)	白い花(本)	赤い花(本)
例	4	5	20	18	12
(1)	5	(ア)	(イ)	(ウ)	24

式の計算 4 解答

$$1. (1) (-0.7)^2 - 0.9 \div \left(-2\frac{1}{2}\right) = 0.49 - \frac{9}{10} \times \left(-\frac{2}{5}\right) = 0.49 + 0.36 = 0.85$$

$$(2) \left(\frac{3}{4} - \frac{2}{3}\right) \times 24 - \left(\frac{1}{6} - \frac{2}{3}\right) \times 6 = \frac{1}{12} \times 24 - \left(-\frac{3}{6}\right) \times 6 = 2 + 3 = 5$$

$$(3) \left(-\frac{1}{2}\right)^3 + \left(-\frac{1}{3}\right)^2 = -\frac{1}{8} + \frac{1}{9} = \frac{-9}{72} + \frac{8}{72} = -\frac{1}{72}$$

$$(4) \frac{3}{4} - \left(-\frac{3}{4}\right)^2 \div \frac{9}{8} + \left(-\frac{1}{3}\right) = \frac{3}{4} - \frac{9}{16} \times \frac{8}{9} + \left(-\frac{1}{3}\right) = \frac{3}{4} - \frac{1}{2} - \frac{1}{3} = \frac{9-6-4}{12} = -\frac{1}{12}$$

$$(5) 11 - \left[\frac{1}{3} - \left(\frac{1}{2} - \frac{1}{3}\right) \times 4\right] = 11 - \left(\frac{1}{3} - \frac{1}{6} \times 4\right) = 11 - \left(-\frac{1}{3}\right) = 11 + \frac{1}{3} = \frac{34}{3}$$

$$(6) \frac{5}{12} - \left(-\frac{1}{3}\right)^2 - \frac{1}{3} \times 0.75 = \frac{5}{12} - \frac{1}{9} - \frac{1}{3} \times \frac{3}{4} = \frac{5}{12} - \frac{1}{9} - \frac{1}{4} = \frac{15-4-9}{36} = \frac{2}{36} = \frac{1}{18}$$

$$2. (1) y = a - a \times \frac{30}{100} = a - 0.3a = a(1 - 0.3) = 0.7a \quad (\text{円})$$

$$(2) y = \frac{3}{100} \times x = 0.03x \quad (\text{g})$$

$$(3) \text{トラック} = 1200 \times \frac{a}{100} = 12a \quad \text{バス} = (1200 - 12a) \times \frac{b}{100} \quad (\text{台})$$

$$(4) x + x \times \frac{a}{100} = 800 \quad \left(1 + \frac{a}{100}\right)x = 800$$

$$(5) \text{A, B, C 3人の合計点} = 3x \quad \frac{3x + y}{4}$$

$$(6) \text{小さい円の半径を } r \text{ とすると, 大きい円の半径は } a + r$$

$$2\pi(a + r) - 2\pi r = 2\pi a \quad \text{cm}$$

$$(7) 300 \times \frac{a}{100} = 3a \quad (\text{g})$$

$$3. \quad (1) \quad S = \frac{(a+b)h}{2} \quad (a+b)h = 2S \quad h = \frac{2S}{a+b}$$

$$a+b = \frac{2S}{h} \quad a = \frac{2S}{h} - b$$

$$(2) \quad S = 2(ab + bc + ac) \quad ab + bc + ac = \frac{S}{2} \quad b(a+c) = \frac{S}{2} - ac = \frac{S-2ac}{2}$$

$$b = \frac{S-2ac}{2(a+c)}$$

$$(3) \quad J = \frac{2}{9}a - \frac{5}{9}c \quad \frac{5}{9}c = \frac{2}{9}a - J \quad c = \frac{9}{5} \left(\frac{2}{9}a - J \right)$$

$$= \frac{2}{5}a - \frac{9}{5}J$$

$$(4) \quad F = \frac{9}{5}c + 32 \quad \frac{9}{5}c = F - 32 \quad c = \frac{5}{9}(F - 32)$$

$$(5) \quad 2(3a - 5b) - 4(a - 2b) = 6a - 10b - 4a + 8b$$

$$= 2a - 2b$$

$$= 2 \times \frac{1}{2} - 2 \times (-4)$$

$$= 1 + 8 = 9$$

以上