

1 計算(1)

p2

確認

- ① -4 ② -8 ③ -64 ④ 1

解説

- ① $-2^2 = -2 \times 2 = -4$
 ② $(-2)^3 = (-2) \times (-2) \times (-2) = -8$
 ③ $-4^3 = -4 \times 4 \times 4 = -64$
 ④ $(-1)^4 = (-1) \times (-1) \times (-1) \times (-1) = 1$

確認

- ① 26 ② -11 ③ 26
 ④ -4 ⑤ -19 ⑥ -26

解説

- ① $-2 \times (-5) + 16 = 10 + 16 = 26$
 ② $-21 \div (+7) + (-8) = -3 - 8 = -11$
 ③ $20 - 12 \div (-2) = 20 + 6 = 26$
 ④ $-16 + (-4) \times (-3) = -16 + 12 = -4$
 ⑤ $-15 \div 5 + (-2) \times 8 = -3 - 16 = -19$
 ⑥ $(-4) \times 6 - (-10) \div (-5) = -24 - 2 = -26$

p3

確認

- ① $-4ab$ ② $6x$
 ③ $-\frac{4}{9m}$ ④ $-8xy$
 ⑤ $\frac{1}{2m}$ ⑥ $\frac{3y^4}{2x}$

解説

- ① $18ab \times (-2ab) \div 9ab = -\frac{18ab \times 2ab}{9ab} = -4ab$
 ② $-15xy \div 5xy \times (-2x) = \frac{15xy \times 2x}{5xy} = 6x$
 ③ $8mn \div (-3m) \div 6mn = -\frac{8mn}{3m \times 6mn} = -\frac{4}{9m}$
 ④ $6xy \div 3xy \times (-4xy) = -\frac{6xy \times 4xy}{3xy} = -8xy$
 ⑤ $-9m^2n^5 \div (-6mn^4) \div 3m^2n = \frac{9m^2n^5}{6mn^4 \times 3m^2n} = \frac{1}{2m}$
 ⑥ $-2xy \times (-3y)^3 \div (6x)^2 = -2xy \times (-27y^3) \div 36x^2 = \frac{2xy \times 27y^3}{36x^2} = \frac{3y^4}{2x}$

p4

確認

- ① $-24a^3$ ② $\frac{3mn^2}{5}$
 ③ $-\frac{2y^2}{x}$ ④ $-\frac{12a^2}{b}$

解説

- ① $15a^2x \div (-\frac{5}{8}ax) \times (-a)^2 = -15a^2x \times \frac{8}{5ax} \times a^2 = -24a^3$
 ② $\frac{9}{10}m^3n \times 4n \div 6m^2 = \frac{9}{10}m^3n \times 4n \times \frac{1}{6m^2} = \frac{3mn^2}{5}$
 ③ $6x^2y^3 \div (2x)^2 \div (-\frac{3}{4}xy) = -6x^2y^3 \times \frac{1}{4x^2} \times \frac{4}{3xy} = -\frac{2y^2}{x}$
 ④ $-\frac{2}{3}ab^3 \times 3a \div \frac{1}{6}b^4 = -\frac{2}{3}ab^3 \times 3a \times \frac{6}{b^4} = -\frac{12a^2}{b}$

p5

確認

- ① $\frac{11x+12y}{20}$ ② $\frac{-11x+7y}{6}$
 ③ $\frac{-x+3y}{15}$ ④ $\frac{3x-y}{3}$

解説

- ① $\frac{3x+4y}{4} + \frac{-x-2y}{5} = \frac{15x+20y}{20} + \frac{-4x-8y}{20} = \frac{11x+12y}{20}$
 ② $\frac{2x-y}{3} - \frac{5x-3y}{2} = \frac{4x-2y}{6} - \frac{15x-9y}{6} = \frac{-11x+7y}{6}$
 ③ $\frac{x+7y}{10} - \frac{x+3y}{6} = \frac{3x+21y}{30} - \frac{5x+15y}{30} = \frac{-2x+6y}{30} = \frac{-x+3y}{15}$
 ④ $2x + y - \frac{3x+4y}{3} = \frac{6x+3y}{3} - \frac{3x+4y}{3} = \frac{3x-y}{3}$

p6

確認

- ① $x = 3$ ② $x = \frac{3}{4}$ ③ $x = \frac{3}{16}$ ④ $x = -\frac{25}{3}$

解説

- ① $0.3x + 0.4 = 0.1x + 1$ の両辺を10倍して
 $10(0.3x + 0.4) = 10(0.1x + 1)$
 $3x + 4 = x + 10$ より
 ② $2x - \frac{5}{4} = \frac{x}{3}$ の両辺を12倍して
 $12(2x - \frac{5}{4}) = 12 \times \frac{x}{3}$
 $24x - 15 = 4x$ より
 ③ $\frac{4x-5}{2} - \frac{2x-9}{3} = \frac{3}{4}$ の両辺を12倍して
 $12(\frac{4x-5}{2} - \frac{2x-9}{3}) = 12 \times \frac{3}{4}$
 $6(4x-5) - 4(2x-9) = 9$ より
 ④ $x + 3 - \frac{x-4}{2} = \frac{5}{6}$ の両辺を6倍して
 $6(x + 3 - \frac{x-4}{2}) = 6 \times \frac{5}{6}$
 $6x + 18 - 3(x-4) = 5$ より

p7

確認

- ① $x = 6$ ② $x = 0$ ③ $x = \frac{2}{3}$ ④ $x = -\frac{15}{8}$

解説

- ① $0.2(x-5) - 1.2(x-3) = -3.4$ の両辺を10倍して
 $2(x-5) - 12(x-3) = -34$ より
 ② $\frac{1}{4}(5x-2) - \frac{3}{2}(2x-3) = 4$ の両辺を4倍して
 $(5x-2) - 6(2x-3) = 16$ より
 ③ $2(3x-2) = 0.3(-x+4) - 1$ の両辺を10倍して
 $20(3x-2) = 3(-x+4) - 10$ より
 ④ $\frac{2}{3}(-x-3) + \frac{3}{4}(4x+5) = \frac{1}{2}$ の両辺を12倍して
 $12 \times \frac{2}{3}(-x-3) + 12 \times \frac{3}{4}(4x+5) = 12 \times \frac{1}{2}$
 $8(-x-3) + 9(4x+5) = 6$ より