

P42 いろいろな計算

問① (1) $4^2 = 4 \times 4 = 16$ (2) $3^3 = 3 \times 3 \times 3 = 27$

(3) $2^5 = 2 \times 2 \times 2 \times 2 \times 2 = 32$

問② (1) $(-3)^3 = (-3) \times (-3) \times (-3) = -9$

(2) $-5^3 = -(5 \times 5 \times 5) = -125$

(3) $-1.5^2 = -(1.5 \times 1.5) = -2.25$

(4) $(-4)^2 \times (-7) = (-4) \times (-4) \times (-7) = -112$

(5) $(-6^2) \div (-2)^3 = \{- (6 \times 6)\} \div \{(-2) \times (-2) \times (-2)\}$
 $= \frac{-36}{-8}$
 $= \frac{9}{2}$

P43 問③ (1) $-4 - 6 \times (-3) = -4 - (-18) = -4 + 18 = 14$

(2) $3 \times (-7) - 9 \times (-8) = (-21) - (-72) = -21 + 72 = 51$

(3) $5 \times (-12) + 14 \div 7 = (-60) + 2 = -58$

(4) $10 \div (-5) - (-6) \times 2 = (-2) - (-12) = -2 + 12 = 10$

(5) $4 \times (-2) + (-3^2) = (-8) + \{- (3 \times 3)\} = (-8) + (-9) = -17$

(6) $(-2)^2 + 2^3 \div (-4) = (-2) \times (-2) + (2 \times 2 \times 2) \div (-4) = 4 + 8 \div (-4) = 4 + (-2) = 2$

問④ (1) $-5 + (13 - 7) \div 3 = -5 + 6 \div 3 = -5 + 2 = -3$

(2) $7 - \{(-2)^2 - (9 - 14)\} = 7 - \{(-2) \times (-2) - (-5)\} = 7 - \{4 - (-5)\} = 7 - (4 + 5) = 7 - 9 = -2$

P44 問⑤ $\{3 + (-4)\} \times (-5) = (-1) \times (-5) = 5$

$3 \times (-5) + (-4) \times (-5) = (-15) + 20 = 5$

結果は等しい。

P44 練習問題

$$\begin{aligned} \textcircled{1} \quad (1) \quad & \underline{(-3^2) \times (-2)^3} & (2) \quad & \underline{(-9)^2 \div (-3^3)} \\ & = \{-(3 \times 3)\} \times \{(-2) \times (-2) \times (-2)\} & & = \{(-9) \times (-9)\} \div \{-(3 \times 3 \times 3)\} \\ & = (-9) \times (-8) & & = 81 \div (-27) \\ & = 72 & & = -3 \end{aligned}$$

$$\begin{aligned} (3) \quad & \underline{2 \times (-2) \div (-2^2)} & (4) \quad & \underline{(-5) \div (-5)^2 \times (-25)} \\ & = 2 \times (-2) \div \{- (2 \times 2)\} & & = (-5) \div \{(-5) \times (-5)\} \times (-25) \\ & = \underline{2 \times (-2) \div (-4)} & & = (-5) \div 25 \times (-25) \\ & = (-4) \div (-4) & & = + \left(\frac{5}{1} \times \frac{1}{25} \times \frac{25}{1} \right) \\ & = 1 & & = 5 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad (1) \quad & \underline{-2 - 18 \div (-6)} & (2) \quad & \underline{9 - (-13) + 7 \times (-8)} \\ & = -2 - (-3) & & = 9 - (-13) + (-56) \\ & = -2 + 3 & & = 9 + 13 - 56 \\ & = 1 & & = -34 \end{aligned}$$

$$\begin{aligned} (3) \quad & \underline{-5 + (15 - 6) \div 3} & (4) \quad & \underline{\{2 + (4 - 8)\} \times 3} \\ & = -5 + \underline{9 \div 3} & & = \{2 + (-4)\} \times 3 \\ & = -5 + 3 & & = (-2) \times 3 \\ & = -2 & & = -6 \end{aligned}$$

$$\begin{aligned} (5) \quad & \underline{8 \times (-2) - (-2^3)} & (6) \quad & \underline{(-2)^3 - (3^2 - 5)} \\ & = (-16) - \underline{- (2 \times 2 \times 2)} & & = \underline{(-2) \times (-2) \times (-2)} - \underline{3 \times 3} \\ & = (-16) - (-8) & & = (-8) - (9 - 5) \\ & = -16 + 8 & & = (-8) - 4 \\ & = -8 & & = -12 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad (1) \quad & \underline{12 \times \left(-\frac{1}{3} + \frac{3}{2}\right)} & (2) \quad & \underline{\left(-\frac{4}{7} + \frac{3}{2}\right) \times 28} \\ & = \underline{12 \times \left(-\frac{1}{3}\right)} + \underline{12 \times \frac{3}{2}} & & = \underline{\left(-\frac{4}{7}\right) \times 28} + \underline{\frac{3}{2} \times 28} \\ & = (-4) + 18 & & = (-16) + 42 \\ & = 14 & & = 26 \end{aligned}$$

P45 数の世界のひろがり と 四則計算

問① $4 \div 2$ や $9 \div 3$ のようにわり切れる場合は、自然数になるが、 $5 \div 2$ や $7 \div 3$ のようにわり切れない場合は、自然数にならないので、いつも自然数になるとは言えない。

P48 正の数・負の数の利用

P49 ① $440 + \{(+6) + (-2) + (-10) + (+14)\} \div 4$

$$\begin{aligned} & = 440 + \underline{8 \div 4} \\ & = 440 + 2 \\ & = 442 \end{aligned}$$

② $500 + \{(+2) + (-18) + (+16) + (-7) + (-3)\} \div 5$

$$\begin{aligned} & = 500 + \underline{(-10) \div 5} \\ & = 500 + (-2) \\ & = 498 \end{aligned}$$

③④ 略

P49 練習問題

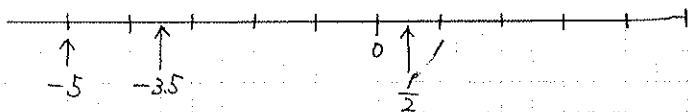
$$\begin{aligned} \textcircled{1} & 150 + \{(+7) + (-14) + 0 + (-8) + (+10) + (+23) + (+17)\} \div 7 \\ & = 150 + \frac{(+35)}{7} \\ & = 150 + 5 \\ & = 155 \quad \text{平均 } 155 \text{ 杯} \end{aligned}$$

$$155 \times 7 = 1085 \quad \text{総売上数 } 1085 \text{ 杯}$$

P50 1章の基本のたしかめ

① (1) -8 (2) $+15$

② A -2.5 B -0.5 C 5



③ (1) -6 個多い (2) -50 円余る

④ 3

⑤ (1) $4 > -6$ (2) $-7 > -8$ (3) $-0.1 < 0$

⑥ (1) $(-6) + (+4)$ (2) $(+5) - (+9)$ (3) $(-3) + (-7)$

$= -2$ $= -4$ $= -10$

(4) $(+9) - (-6)$ (5) $-2 + 5 - 8$ (6) $7 + (-11) - (-5)$

$= 9 + 6$ $= 5 - 10$ $= 7 - 11 + 5$

$= 15$ $= -5$ $= 12 - 11$

$= 1$

⑦ (1) $3 \times (-2)$ (2) $(-3) \times (-2)$ (3) $(-8) \div 2$

$= -6$ $= 6$ $= -4$

(4) $(-8) \div (-2)$ (5) $(-3) \times (-2) \times (-5)$ (6) $30 \div (-5) \times (-2)$

$= 4$ $= -(3 \times 2 \times 5)$ $= + \left(\frac{30}{1} \times \frac{1}{5} \times \frac{2}{1} \right)$

$= -30$ $= 12$

⑧ (1) 3^4 (2) $(-6)^2$ (3) -3^4

$= 3 \times 3 \times 3 \times 3$ $= (-6) \times (-6)$ $= -(3 \times 3 \times 3 \times 3)$

$= 81$ $= 36$ $= -81$

(4) $6 - 12 \div (-3)$ (5) $6 - 3 \times (7 - 4)$

$= 6 - (-4)$ $= 6 - 3 \times 3$

$= 6 + 4$ $= 6 - 9$

$= 10$ $= -3$

P51 1章の章末問題

① (1) $7 \div -25$ (2) $-11 \div -18$ (3) $(-51) + 29$

$= -18$ $= -29$ $= -22$

(4) $-6 - (-16)$ (5) $17 + (-36)$ (6) $-8.9 \div 9.1$

$= -6 + 16$ $= 17 - 36$ $= 0.2$

$= 10$ $= -19$

(7) $-24 \div -34$ (8) $\frac{2}{3} + \left(-\frac{7}{4}\right)$ (9) $-\frac{2}{5} + \left(-\frac{3}{5}\right)$

$= -5.8$ $= \frac{8}{12} - \frac{21}{12}$ $= -\frac{5}{5}$

$= -\frac{13}{12}$ $= -1$

$$(10) 3 + (-7) + 2$$

$$= \cancel{3} - \cancel{7} + 2$$

$$= 5 - 7$$

$$= -2$$

$$(11) -31 - (-18) + 16$$

$$= -31 + \cancel{18} + 16$$

$$= 34 - 31$$

$$= 3$$

$$(12) 0.4 + (-3.2) + 5.6$$

$$= \cancel{0.4} - \cancel{3.2} + 5.6$$

$$= 6 - 3.2$$

$$= 2.8$$

$$(13) \cancel{-1.8} - \cancel{-4.3} + 3.5$$

$$= 3.5 - 6.1$$

$$= -2.6$$

$$(14) \frac{1}{5} - \frac{2}{5} - \frac{3}{5}$$

$$= \frac{1}{5} - \frac{5}{5}$$

$$= -\frac{4}{5}$$

$$(15) -\frac{1}{2} + \frac{1}{3} - \frac{1}{4}$$

$$= -\frac{6}{12} + \frac{4}{12} - \frac{3}{12}$$

$$= \frac{4}{12} - \frac{9}{12}$$

$$= -\frac{5}{12}$$

$$(16) -5 - 2 + (-2) - 4$$

$$= \cancel{-5} - \cancel{2} - \cancel{2} - 4$$

$$= -13$$

$$(17) -21 + (-6) - (-21) + (-8)$$

$$= \cancel{-21} - 6 + \cancel{21} - 8$$

$$= -14$$

$$(18) \cancel{3} + \cancel{7} - \cancel{15} - \cancel{6} + 2$$

$$= 12 - 21$$

$$= -9$$

$$(19) 18 - (-7) - 14 + (-7) - 18$$

$$= \cancel{18} + \cancel{7} - \cancel{14} - \cancel{7} - 18$$

$$= -14$$

$$\textcircled{2} (1) (-8) \times 12$$

$$= -96$$

$$(2) (-10) \times (-56)$$

$$= 560$$

$$(3) 460 \div (-4)$$

$$= -115$$

$$(4) 0 \times (-27)$$

$$= 0$$

$$(5) (-1.8) \times (-11)$$

$$= 19.8$$

$$(6) -1.2 \div (-0.4)$$

$$= 3$$

$$(7) 0 \div (-0.2)$$

$$= 0$$

$$(8) \frac{8}{5} \times \left(-\frac{3}{4}\right)$$

$$= -\frac{3}{5}$$

$$(9) \left(-\frac{8}{9}\right) \div \left(-\frac{2}{3}\right)$$

$$= +\left(\frac{8^4}{9^3} \times \frac{60}{4}\right)$$

$$= \frac{4}{3}$$

$$(10) 7 \div 35 \times (-25)$$

$$= -\left(\frac{7}{1} \times \frac{1}{35} \times \frac{25}{1}\right)$$

$$= -5$$

$$(11) (-54) \div (-6) \div (-3)$$

$$= -\left(\frac{54^9}{1} \times \frac{1}{6} \times \frac{1}{3}\right)$$

$$= -3$$

$$(12) 18 \div \left(-\frac{9}{2}\right) \times \left(-\frac{5}{8}\right)$$

$$= +\left(\frac{18^2}{1} \times \frac{2}{9} \times \frac{5}{8}\right)$$

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

$$(13) -\frac{3}{8} \div \frac{1}{4} \div \left(-\frac{9}{5}\right)$$

$$= +\left(\frac{3}{8} \times \frac{4}{1} \times \frac{5}{9}\right)$$

$$= \frac{5}{6}$$

$$\textcircled{3} (1) -0.6^2$$

$$= -(0.6 \times 0.6)$$

$$= -0.36$$

$$(2) \frac{(-4)^2 \times (-12) \div (-2)^4}{(-4) \times (-4)}$$

$$= 16 \times (-12) \div 16$$

$$= -\left(\frac{16}{1} \times \frac{12}{1} \times \frac{1}{16}\right)$$

$$= -12$$

$$(3) \quad (-5) - 70 \div (-14) \quad (4) \quad -59 + 6 \times (-7) - 32$$

$$= (-5) - (-5) \quad = -59 + (-42) - 32$$

$$= -5 + 5 \quad = -59 - 42 - 32$$

$$= 0 \quad = -133$$

$$(5) \quad 20 \times 3 - (-18 + 7) \times 5 \quad (6) \quad \{1 + (0.6 - 1.5)\} \times (-0.1)$$

$$= 60 - (-11) \times 5 \quad = \{1 + (-0.9)\} \times (-0.1)$$

$$= 60 - (-55) \quad = 0.1 \times (-0.1)$$

$$= 60 + 55 \quad = -0.01$$

$$= 115$$

$$(7) \quad \frac{(-4)^2 \times 5 - (-3^2)}{(-1) \times (-4)} \quad (8) \quad 25 \times (-14) + 75 \times (-14)$$

$$= \frac{16 \times 5 - (-9)}{4} \quad = (25 + 75) \times (-14)$$

$$= 80 - (-9) \quad = 100 \times (-14)$$

$$= 80 + 9 \quad = -1400$$

$$= 89$$

$$(9) \quad \frac{1}{2} \times \left(-\frac{1}{3}\right) - \frac{2}{3} \times \frac{5}{2}$$

$$= -\frac{1}{6} - \frac{10}{6}$$

$$= -\frac{11}{6}$$

$$(10) \quad \left(\frac{1}{4} + \frac{5}{8}\right) \times (-12) - (-13)$$

$$= \frac{1}{4} \times (-12) + \frac{5}{8} \times (-12) - (-13)$$

$$= (-3) + (-10) - (-13)$$

$$= -3 - 10 + 13$$

$$= 0$$

- ④ (1) -16, 7, 0 (2) 11.2 (3) -16
 (4) -16 (5) $-\frac{1}{100}$ (6) -0.2, -16, $-\frac{1}{100}$

⑤

9	-4	a	b
c	3	4	d
2	e	0	5
-3	f	8	-6

$9 + 3 + 0 + (-6) = 6$

$$c = 6 - \{9 + 2 + (-3)\} \quad d = 6 - \{(-2) + 3 + 4\}$$

$$= 6 - 8 \quad = 6 - 5$$

$$= -2 \quad = 1$$

$$b = 6 - \{1 + 5 + (-6)\} \quad a = 6 - \{9 + (-4) + 6\}$$

$$= 6 - 0 \quad = 6 - 11$$

$$= 6 \quad = -5$$

$$e = 6 - \{2 + 0 + 5\} \quad f = 6 - \{(-4) + 3 + (-1)\}$$

$$= 6 - 7 \quad = 6 - (-2)$$

$$= -1 \quad = 6 + 2$$

$$g = 6 - \{(-3) + 8 + (-6)\} \quad = 8$$

$$= 6 - (-1)$$

$$= 6 + 1$$

$$= 7$$