

大問 11

$$(1) -2^2 - 8 \div (-5)$$

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

$$= -4 + \frac{8}{5}$$

$$= \frac{-20+8}{5}$$

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

$$(2) 4a^2b \div \left(-\frac{2}{5}ab\right) \times 7b^2$$

$$= -\frac{\overset{2}{4}a^2b \times 5 \times 7b^2}{\cancel{2}ab}$$

$$= -70ab^2 //$$

$$(3) (2x-1)^2 - (x+3)(x-6)$$

$$= (4x^2 - 4x + 1) - (x^2 - 3x - 18)$$

$$= 4x^2 - 4x + 1 - x^2 + 3x + 18$$

$$= 3x^2 - x + 19 //$$

$$(4) 1つの外角 = \frac{360^\circ}{30} = 12^\circ$$

$$\therefore 1つの内角 = 180^\circ - 12^\circ = 168^\circ //$$

大問1□ 続き その1

$$(5) \begin{cases} 5x + 4y = 9 & \dots \textcircled{1} \\ 2x + 3y = -2 & \dots \textcircled{2} \end{cases}$$

$$\textcircled{1} \times 3 - \textcircled{2} \times 4$$

$$15x + 12y = 27$$

$$\rightarrow \frac{8x + 12y = -8}{\hline}$$

$$7x = 35$$

$$\therefore x = 5$$

$$\therefore (x, y) = (5, -4) //$$

$$\textcircled{2}' \quad 3y = -2x - 2$$

$$y = -\frac{2}{3}x - \frac{2}{3}$$

$$\dots \textcircled{2}'$$

$$x = 5 \text{ を } \textcircled{2}' \text{ に代入}$$

$$y = -\frac{2}{3} \times 5 - \frac{2}{3}$$

$$= -\frac{10}{3} - \frac{2}{3}$$

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

$$(6) x^2y - 2xy$$

$$= x(y(x-2)) \dots \textcircled{1}$$

$$x = \sqrt{6} + 2, \quad y = \sqrt{6} - 2 \text{ より}$$

$$xy = (\sqrt{6} + 2)(\sqrt{6} - 2)$$

$$= 6 - 4 = 2 \dots \textcircled{2}$$

$$x - 2 = \sqrt{6} + 2 - 2$$

$$= \sqrt{6} \dots \textcircled{3}$$

$$\textcircled{2}, \textcircled{3} \text{ を } \textcircled{1} \text{ に代入}$$

$$\therefore \text{5式} = 2\sqrt{6} //$$

大問Ⅰ 続き その2.

(7) $3x^2 - 2x - 5 = 0$

$$x = \frac{2 \pm \sqrt{(-2)^2 - 4 \times 3 \times (-5)}}{2 \times 3}$$

$$= \frac{2 \pm \sqrt{4 + 60}}{6} = \frac{2 \pm \sqrt{64}}{6} = \frac{2 \pm 8}{6}$$

$$x = \frac{10}{6}, -\frac{6}{6} \quad \therefore x = \frac{5}{3}, -1 //$$

(8) $y = \frac{4}{3}x - 7$ ①) x の増分 = Δx , y の増分 = Δy

とすると

$$\Delta y = \frac{4}{3} \Delta x$$

$$\Delta x = 6 \text{ を代入して } \Delta y = \frac{4}{3} \times 6 = 8 //$$

(9) 2, 2, 5, x , 13, 15 の数で.

$$\text{平均値} = \frac{2+2+5+x+13+15}{6} = \frac{x+37}{6} \dots \text{①}$$

$$\text{中央値} = \frac{5+x}{2} \dots \text{②}$$

① = ② より

$$\frac{x+37}{6} = \frac{x+5}{2}$$

(続く)

大問 11 続き. 3の3

(9) 続き.

$$X + 37 = \frac{X + 5}{2} \times 6$$

$$X + 37 = 3(X + 5)$$

$$3X + 15 = X + 37$$

$$2X = 37 - 15 = 22.$$

$$\therefore X = 11 //$$