

<解> PART19

(ア) まずは全体の符号を決める → 「-」が3つ分 → 全体の符号は「-」

$$\begin{aligned} \text{(与式)} &= -\frac{18a^2b \times ab^3}{9b^2} \\ &= \underline{\underline{-2a^3b^2}} \end{aligned}$$

$$\begin{aligned} \text{(イ)} \text{ (与式)} &= 8\sqrt{3} + 2\sqrt{3} - 5\sqrt{3} \\ &= \underline{\underline{5\sqrt{3}}} \end{aligned}$$

$$\begin{aligned} \text{(ウ)} \quad (x+2)^2 - 18 &= 0 \\ (x+2)^2 &= 18 \\ x+2 &= \pm 3\sqrt{2} \\ x &= \underline{\underline{-2 \pm 3\sqrt{2}}} \end{aligned}$$

$$\begin{aligned} \text{(エ)} \quad a^2 + 4a + 4 \\ &= (a+2)^2 \\ &= (\sqrt{3} - 2 + 2)^2 = \underline{\underline{3}} \end{aligned}$$

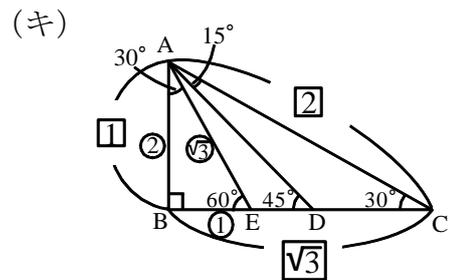
(オ) (与式) に $x=1$ 、 $y=-2$ を代入

$$\begin{aligned} \begin{cases} a-2b=2 \\ b+2a=14 \end{cases} &\longrightarrow \begin{cases} a-2b=2 \\ 2a+b=14 \end{cases} \xrightarrow[\times 1]{\times 2} \begin{cases} 2a-4b=4 \\ 2a+b=14 \end{cases} \\ &\hspace{15em} \underline{-} \hspace{15em} \\ &\hspace{15em} -5b=-10 \hspace{10em} a-4=2 \\ &\hspace{15em} \underline{\underline{b=2}} \hspace{10em} \underline{\underline{a=6}} \end{aligned}$$

(カ)

	(a)						
	1	2	3	4	5	6	
	11	11	22	33	44	55	66
	12	12	(24)	36	(48)	60	(72)
(b+10)	13	13	26	39	52	65	78
	14	14	28	42	(56)	70	84
	15	15	30	45	60	75	90
	16	(16)	(32)	(48)	(64)	(80)	(96)

$$\frac{10}{36} = \frac{5}{18}$$

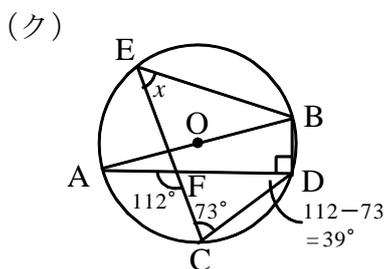


AE = 4cmより、BE = 2cm、AB = $2\sqrt{3}$ cm

BC = $\sqrt{3}$ AB = $2\sqrt{3} \times \sqrt{3} = 6$ cm

AB = BDより、BD = $2\sqrt{3}$ cm

よって、CD = BC - BD
 = $\underline{\underline{(6 - 2\sqrt{3}) \text{ cm}}}$



円に内接する四角形の性質より、

$$x + 90 + 39 = 180$$

$$\underline{\underline{x = 51^\circ}}$$