

Kyokuzai

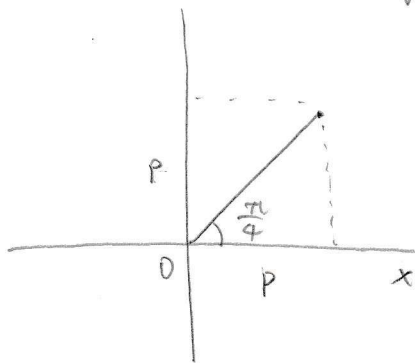
極座標が次のような点の直交座標を求めよ。

(1) $(3\sqrt{2}, \frac{\pi}{4})$

(2) $(2, \frac{4}{3}\pi)$

(3) $(-3, \pi)$

1)



$$\sqrt{p^2 + p^2} = 3\sqrt{2}$$

$$2p^2 = 18$$

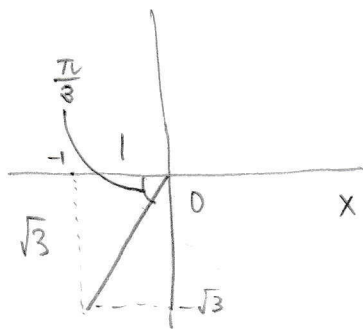
$$p^2 = 9$$

$$p = \pm 3$$

$$p > 0 \text{ 故}$$

$$\underline{(3, 3)}$$

2)



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

$$\underline{(-1, -\sqrt{3})}$$

$$\sqrt{p^2 + (\sqrt{3}p)^2} = 2$$

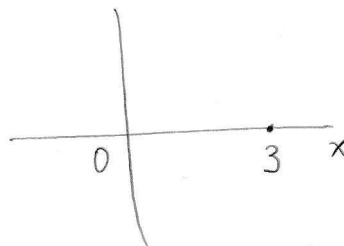
$$\sqrt{4p^2} = 2$$

$$2p = 2$$

$$p = 1$$

3)

$$\begin{aligned} (-3, \pi) &= (3, \pi + \pi) \\ &= (3, 2\pi) \end{aligned}$$



$$\underline{(3, 0)}$$