

2010年第10問


 数理  
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10 2直線  $x+y-5=0$ ,  $(\sqrt{3}-2)x-y-4\sqrt{3}=0$  のなす角を  $\theta$  とする ( $0 \leq \theta \leq \frac{\pi}{2}$ ).  $\frac{\pi}{\theta}$  の値を求めよ.

$$\tan \theta = \tan (\beta - \alpha)$$

$$= \frac{\tan \beta - \tan \alpha}{1 + \tan \alpha \tan \beta}$$

$$= \frac{\sqrt{3} - 2 + 1}{1 + (-1) \cdot (\sqrt{3} - 2)}$$

$$= \frac{\sqrt{3} - 1}{3 - \sqrt{3}}$$

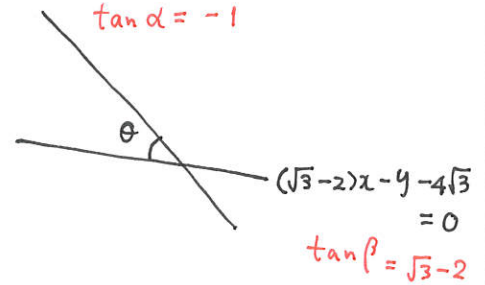
$$= \frac{1}{\sqrt{3}}$$

$$\therefore \theta = \frac{\pi}{6}$$

$$\therefore \frac{\pi}{\theta} = \underline{\underline{6}}$$

$$x+y-5=0$$

$$\tan \alpha = -1$$



$$(\sqrt{3}-2)x-y-4\sqrt{3}=0$$

$$\tan \beta = \sqrt{3}-2$$