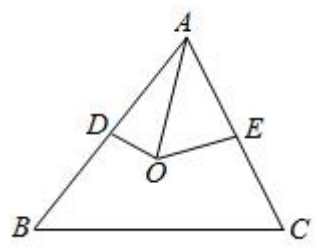


$$\vec{a} \cdot \vec{b} = |\vec{a}| |\vec{b}| \cos \angle = \dots$$

$$\vec{a} + \vec{b} = \vec{c} \quad \Delta$$



$$|\vec{a}| = \dots \quad |\vec{b}| = \dots \quad |\vec{c}| = \dots$$

$$\dots + \dots = \dots$$

$$= \frac{\sqrt{\dots}}{\dots} = \frac{\sqrt{\dots}}{\dots}$$

$$\frac{\sqrt{\dots}}{\dots} \quad \sqrt{\dots} \quad \dots + \dots = \dots \quad \circ \quad \circ$$

-

$$\dots + \sqrt{\dots} = \dots + \sqrt{\dots} =$$

$$= \frac{\dots - \sqrt{\dots}}{\dots} < < \pi = \frac{\pi}{\dots}$$

$$= \frac{\pi}{\dots} = \dots = \dots + (\sqrt{\dots}) - \dots \times \sqrt{\dots} \times \left( -\frac{\sqrt{\dots}}{\dots} \right) =$$

$$= \sqrt{\dots}$$

$$\dots = \dots \quad \frac{\sqrt{\dots}}{\sqrt{\dots}} = \frac{\sqrt{\dots}}{\dots} = \frac{\sqrt{\dots}}{\dots} = \frac{\sqrt{\dots}}{\dots}$$

$$\Delta = \dots = \dots = \frac{\sqrt{\dots}}{\sqrt{\dots}} = \frac{\sqrt{\dots}}{\dots}$$

$$= \frac{\Delta}{\sqrt{\dots}}$$

$$\vec{r} = \left( \dots \quad ( + ) \quad \dots \right) \quad \vec{r} = \left( - \right) \quad \vec{r} \perp \vec{r} \quad \vec{r} \cdot \vec{r} =$$

$$\vec{r} \cdot \vec{r} = - \left[ \dots \quad ( + ) \right] + \dots = - \quad ( + ) + \quad ( - ) =$$

$$- \quad + \quad + \quad + \quad =$$

$$- \quad + \quad = \quad = -$$

$$\Delta = - \quad \frac{\Delta}{\dots} = \frac{\dots}{\dots} = \dots = \dots$$

$$\Delta = - \quad ( + )$$

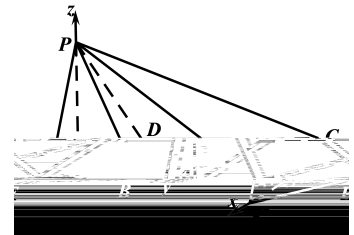
$$\frac{\Delta}{\dots} = - \quad ( + ) = \frac{\dots}{\dots} = \frac{\dots}{\dots}$$

$$+ \geq \sqrt{\dots} = -$$

$$\frac{\Delta}{\dots} \geq - \quad = \left( \frac{\Delta}{\dots} \right) = -$$

$$\therefore \perp$$

$$\therefore \perp \perp \perp$$



$$= - \quad = -$$

$$\Delta = \perp =$$

$$\dots = \dots = - \quad = - \quad = -$$

$$( ) \quad ( ) \quad \left( - \right) \quad ( - )$$

$$\vec{u} = (-1 \ -1) \quad \vec{v} = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

$\theta$

$$\theta = \left| \langle \vec{u}, \vec{v} \rangle \right| = \frac{\left| \vec{u} \cdot \vec{v} \right|}{\|\vec{u}\| \|\vec{v}\|} = \frac{\left| -1 \cdot (-1) + (-1) \cdot (-1) \right|}{\sqrt{1^2 + 1^2} \sqrt{1^2 + 1^2}} = \frac{\sqrt{2}}{2}$$

$$\vec{u} = (-1 \ -1) \quad \vec{v} = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

$$= \begin{pmatrix} -1 \\ -1 \end{pmatrix} \begin{cases} \cdot \vec{u} = \\ \cdot \vec{v} = \end{cases} \begin{cases} -1 = \\ -1 = \end{cases}$$

$$= \vec{u} = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

$$\vec{v} = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

$\varphi$        $\varphi$

$$\varphi = \left| \langle \vec{u}, \vec{v} \rangle \right| = \frac{\left| \vec{u} \cdot \vec{v} \right|}{\|\vec{u}\| \|\vec{v}\|} = \frac{\left| -1 \cdot (-1) + (-1) \cdot (-1) \right|}{\sqrt{1^2 + 1^2} \sqrt{1^2 + 1^2}} = \frac{\sqrt{2}}{2} \quad \varphi = \frac{\sqrt{2}}{2}$$

$$\vec{u} = \begin{pmatrix} -1 \\ -1 \end{pmatrix} \quad \vec{v} = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

$\therefore$

$\therefore$

$$\therefore \subset \quad \varnothing \quad \therefore$$

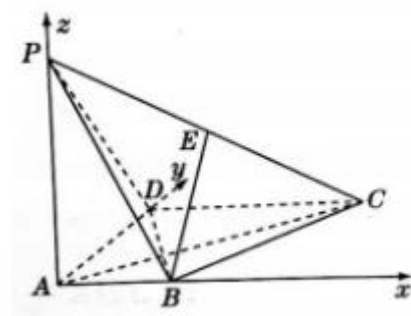
$$\subset \quad \varnothing$$

$$\cap = \therefore$$

$$\vec{u} = \begin{pmatrix} -1 \\ -1 \end{pmatrix} \quad \vec{v} = \begin{pmatrix} -1 \\ -1 \end{pmatrix} \quad \vec{w} = \begin{pmatrix} -1 \\ -1 \end{pmatrix} \quad \vec{x} = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

$$\vec{u} = \lambda \vec{v} \quad \leq \lambda \leq$$

$$\vec{u} = \vec{v} + \vec{w} = \vec{v} + \lambda \vec{v} = (-1 - \lambda \ -1 - \lambda)$$



$$\frac{1}{\lambda} = \frac{1}{(-\lambda) + (-\lambda)} = \lambda = -$$

$$= \left( \frac{1}{-\lambda} \right) = \left( \frac{1}{\lambda} \right)$$

$$\left\{ \begin{aligned} \frac{1}{\lambda} &= \frac{1}{-\lambda} \\ \frac{1}{\lambda} &= \frac{1}{-\lambda} \end{aligned} \right. = \left\{ \begin{aligned} \frac{1}{-\lambda} &= \frac{1}{-\lambda} \\ \frac{1}{-\lambda} &= \frac{1}{-\lambda} \end{aligned} \right. =$$

$$= \left( \frac{1}{-\lambda} \right)$$

$$= \left( \frac{1}{\lambda} \right)$$

$$\langle \frac{1}{\lambda} \rangle = \frac{1}{\sqrt{\lambda}} = \frac{\sqrt{\lambda}}{\lambda} = \frac{1}{\sqrt{\lambda}}$$

= .

$$= . \quad = + .$$

$$= \frac{1}{\lambda} = - \sum_{\lambda} = \sum_{\lambda} = \frac{1}{\lambda} = \sum_{\lambda} =$$

$$\beta = \frac{\sum_{\lambda} \frac{1}{\lambda}}{\sum_{\lambda} \frac{1}{\lambda}} = \alpha = \frac{1}{\lambda} - \beta = \frac{1}{\lambda} + .$$

$$= + = \times = = + = \times =$$

$$= \left( \omega - \right) = \left( \omega + \omega - \right)$$

$$= \omega + \omega - = \omega + \alpha \cdot \omega -$$

$$= \frac{\omega}{\omega} + \omega - = \omega - \omega = \frac{\sqrt{\pi}}{\omega} \left( \omega - \frac{\pi}{\omega} \right)$$

$$\left( \right) \quad \frac{\pi}{\omega} \quad \left( \right) = \pi$$

$$\frac{\pi}{\omega} = \pi \quad \omega = \frac{\sqrt{\pi}}{\pi} \left( -\frac{\pi}{\pi} \right)$$

$$= \frac{\sqrt{\pi}}{\pi} \left( -\frac{\pi}{\pi} \right) \in \left[ \frac{\pi}{\pi} \right] \quad -\frac{\pi}{\pi} \leq -\frac{\pi}{\pi} \leq \frac{\pi}{\pi}$$

$$(\ ) = \in \left[ \frac{\pi}{\pi} \right] \quad -\leq < \frac{\sqrt{\pi}}{\pi}$$

$$-\frac{\pi}{\pi} = \frac{\pi}{\pi} + \pi \in \frac{\pi}{\pi} + \pi \in \left[ \frac{\pi}{\pi} \right] = \frac{\pi}{\pi}$$

$$(\ ) = > + = \frac{\pi}{\pi}$$

$$= - - = + - -$$

$$- = = - = - + - = - \left( - - \right) + - +$$

$$= - = \sqrt{\pi} \left( -\frac{\pi}{\pi} \right) \quad -\frac{\pi}{\pi} \leq -\frac{\pi}{\pi} \leq \frac{\pi}{\pi}$$

$$-\sqrt{\pi} \leq \leq$$

$$- < -\sqrt{\pi} < -\sqrt{\pi} = - + - + -\sqrt{\pi}$$

$$= -\sqrt{\pi} = -\sqrt{\pi} - \frac{\sqrt{\pi}}{\pi} + = -\frac{\sqrt{\pi}}{\pi} -$$

$$-\frac{\sqrt{\pi}}{\pi} - = = -\sqrt{\pi} > -\sqrt{\pi}$$

$$-\sqrt{\pi} \leq -\leq -\sqrt{\pi} \leq \leq = - = - +$$

$$- + = = \pm$$

$$- > > = - + - + -\sqrt{\pi}$$

$$= = - - = =$$

