

صالح بن ابراهيم - دهم شهر - ١٨

$$1) \tan \frac{d\theta}{d\varphi} \sin \frac{d\theta}{r} + \cos \frac{\theta}{r} \cdot (-\frac{\sqrt{r}}{a}) \cdot (-\frac{\sqrt{r}}{a}) + (-\frac{\sqrt{r}}{a}) \cdot \frac{1}{r} - \frac{\sqrt{r}}{r} \cdot \frac{\sqrt{r}}{r} = 0$$

②

1, VZ

قسمت ب. ۱۰

②

② 4

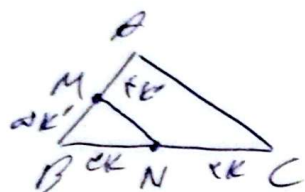


①

$$u = r(CK + YK) + r(1A + 1Y) + \boxed{\text{[red X]}}$$

$$r \sin \theta = r \sin \theta \quad r_1 \sin \theta_1 = r_2 \sin \theta_2 \Rightarrow \sin \theta = \frac{r_1}{r_2} \sin \theta_1$$

$$\Rightarrow \theta = 30^\circ \Rightarrow \tan \theta = \frac{r}{\frac{\sqrt{c}}{r}} = \sqrt{\frac{r}{c}} \quad \checkmark$$



$$\Rightarrow \triangle BAK \sim \triangle KMB \sim \triangle C$$

$$\Rightarrow \angle BAK = \angle KMB$$

$$\Rightarrow \frac{BM}{AM} = \frac{AK}{BK} = \sqrt{\frac{d}{f}} \quad \checkmark$$

$$\frac{|\sin \alpha|}{\cos \alpha} = -\tan \alpha \Rightarrow |\sin \alpha| = -\sin \alpha \Rightarrow \sin \alpha < 0$$

$$\frac{1}{|\cos \alpha|} = \tan \alpha \Rightarrow \frac{1 + \sin \alpha}{|\cos \alpha|} \begin{cases} \cos \alpha > 0 \Rightarrow \frac{1}{\cos \alpha} = \frac{\sin \alpha}{\cos \alpha} \Rightarrow \frac{1 + \sin \alpha}{\cos \alpha} \Rightarrow \frac{1 - \sin \alpha}{\cos \alpha} \Rightarrow \frac{1 + \sin \alpha}{\cos \alpha} \quad \text{Incorrect} \\ \cos \alpha < 0 \Rightarrow \frac{1}{-\cos \alpha} = \frac{\sin \alpha}{\cos \alpha} \Rightarrow \frac{1 + \sin \alpha}{-\cos \alpha} \Rightarrow \frac{-1 - \sin \alpha}{\cos \alpha} \Rightarrow \frac{1 + \sin \alpha}{\cos \alpha} \quad \checkmark \end{cases}$$

$$\Rightarrow \left. \begin{matrix} \sin \alpha < 0 \\ \cos \alpha < 0 \end{matrix} \right\} \Rightarrow \alpha \text{ is in the third quadrant} \quad \checkmark$$

$$\text{ب) } 1 + \tan \alpha = \frac{1}{\cos \alpha} \xrightarrow{\text{دال بر}} \cos \alpha = \frac{\sqrt{f}}{1} \quad \frac{\sin \alpha + \cos \alpha = 1}{\sin \alpha = \frac{\sqrt{f}}{10}}$$

$$\sin\left(\frac{13\pi}{f} + \alpha\right) = \sin\left(\pi + \frac{\pi}{f} + \alpha\right) = -\sin\left(\frac{\pi}{f} + \alpha\right) \xrightarrow{\text{دال بر}} \frac{-f}{a}$$