

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۹ کلاس (۱۳۸۵) A

$$12A \rightarrow ? Rad \Rightarrow \frac{12\omega}{1\lambda} \cdot \frac{Rad}{\pi} \Rightarrow Rad = \frac{12\omega}{\pi} \quad \left(\frac{12\omega}{\pi} \right)$$

$$Rad = \frac{12\pi}{10} \cdot \frac{1}{1\lambda} \leftarrow \frac{12V}{1\lambda_0} \cdot \frac{Rad}{\pi} \leftarrow (الف) \quad 12V \rightarrow ? Rad$$

$$\frac{6\pi}{\lambda} \rightarrow ? \Rightarrow \frac{6\pi}{\lambda} = \frac{\pi}{1\lambda_1} \Rightarrow \frac{6}{\lambda} = \frac{1}{1\lambda_1} \Rightarrow \lambda = 6 \cdot 1\lambda_1 \Rightarrow \lambda = 6 \cdot 1\lambda_1$$

$$\frac{12\pi}{\lambda} = \frac{12\pi}{1\lambda_0} \Rightarrow \frac{12}{\lambda} = \frac{12}{1\lambda_0} \Rightarrow \lambda = 1\lambda_0 \Rightarrow \lambda = 1\lambda_0$$

$$\frac{12\omega}{\lambda} \rightarrow ? \Rightarrow \frac{12\omega}{\lambda} = \frac{\omega}{1\lambda_1} \Rightarrow \lambda = 12 \cdot 1\lambda_1 \Rightarrow \lambda = 12 \cdot 1\lambda_1$$

$$\frac{12\omega}{\lambda} = \frac{\omega}{1\lambda_1} \Rightarrow \lambda = 12 \cdot 1\lambda_1 \Rightarrow \lambda = 12 \cdot 1\lambda_1$$

$$\left\{ \begin{array}{l} \frac{12\omega}{\lambda} + \frac{12\omega}{\lambda} + \frac{12\omega}{\lambda} = 1\lambda_1 \\ \frac{12\omega}{\lambda} = 1\lambda_0 \Rightarrow \lambda = 12 \cdot 1\lambda_0 \end{array} \right.$$

(الف) $\tan \phi = \frac{C_1 \phi}{C_2 \phi} = 1$ $\left\{ \begin{array}{l} \cos \phi_1 \cdot \cos \phi_2 - \sin \phi_1 \cdot \sin \phi_2 = 0 \\ \sin \phi_1 = \cos \phi_2, \cos \phi_1 = \sin \phi_2 \end{array} \right. \Rightarrow -1 + 1 = 0$

(ب) $\frac{\left(\frac{\sqrt{r}}{r}\right)^2 + 1 + \left(\frac{\sqrt{r}}{r}\right)^2}{\sqrt{r} - \frac{\sqrt{r}}{r}} = \frac{1}{\sqrt{r}} = \frac{1}{\sqrt{r}} \Rightarrow \frac{1}{\sqrt{r}} = \frac{1}{\sqrt{r}}$

$$-\left(\frac{1}{r} \times \frac{1}{r}\right) + \left(\frac{\sqrt{r}}{r} \times \frac{\sqrt{r}}{r}\right) = \sin \theta \Rightarrow \sin \theta = \frac{1}{r} \Rightarrow \frac{1}{r} = \frac{1}{r} \Rightarrow \sin \theta = \frac{1}{r}$$

$$\sin \theta = \frac{1}{r} \Rightarrow \theta = \phi \Rightarrow \tan \phi = 1$$

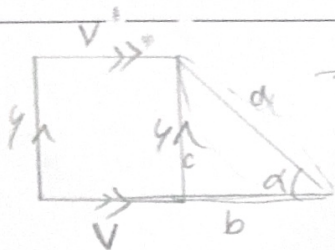
$$\frac{2 \times \left(\frac{\sqrt{r}}{r}\right) (1 - \left(\frac{\sqrt{r}}{r}\right)^2)}{(1 - \left(\frac{\sqrt{r}}{r}\right)^2) (1 - \left(\frac{\sqrt{r}}{r}\right)^2)} = \tan \theta \Rightarrow \tan \theta = \frac{2}{1} \Rightarrow \tan \theta = 2$$

$$\frac{\frac{\sqrt{r}}{r}}{1 - \frac{1}{r}} = \sqrt{r} \tan \theta \Rightarrow \theta = 45^\circ \Rightarrow \frac{1}{1\lambda_1} = \frac{Rad}{\pi} \Rightarrow Rad = \frac{\pi}{1\lambda_1}$$

$$\tan \theta = d \Rightarrow \sin \theta = d \cos \theta$$

↓
جواب

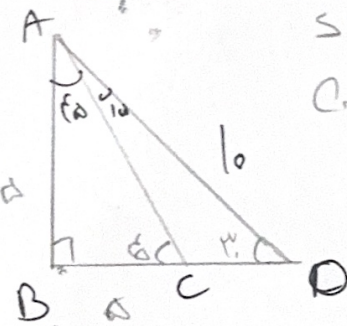
$$\frac{1d \cos \theta - \cos \theta}{d \cos \theta - \cos \theta} = \frac{1 \cos \theta}{\cos \theta} = 1$$



$$\sin \alpha = \frac{4}{1} = \frac{d}{1} \Rightarrow d = 10$$

$$b = \sqrt{10^2 - 4^2} = 8$$

$$P = 4 + 4 + 1 + d + b = 4 + 4 + 1 + 10 + 8 = 27$$

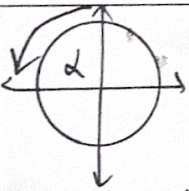


$$\sin 30^\circ = \frac{1}{2} = \frac{AB}{AD} \Rightarrow AB = d$$

$$\cos 30^\circ = \frac{\sqrt{3}}{2} = \frac{BD}{AD} \Rightarrow BD = d\sqrt{3}$$

$$ABC \rightarrow \text{مستقيم} \Rightarrow AB = BC = d$$

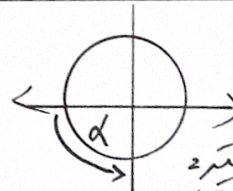
$$\left\{ \begin{array}{l} CD \cdot BD = BC^2 \\ d\sqrt{3} \cdot d = d^2 \\ d(\sqrt{3} - 1) \end{array} \right.$$



(ب) ناصبه ۲

که کشیدیم از مرکز دور شده و کمتر می شود
به سمت فنجر!

سینوس به سنر نزدیکتر به سمت فنجر کمتر می شود.

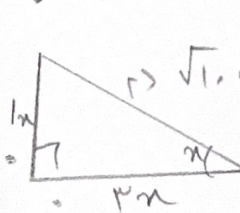


الف) ناصبه ۳

که کشیدیم به سنر نزدیکتر
به سمت فنجر! بیشتر می شود.
سینوس از سنر دورتر به سمت فنجر کمتر می شود.
به سمت فنجر

$$\tan \alpha = \frac{1}{\sqrt{10}} \Rightarrow \sin \alpha = \frac{1}{\sqrt{10}}, \cos \alpha = \frac{3}{\sqrt{10}}$$

↓



$$\Rightarrow \sin \alpha = \frac{1m}{\sqrt{10}m} = \frac{1}{\sqrt{10}} = \frac{-1}{\sqrt{10}}$$