

Subject:

دوره د فترت - ۱۹

کتابخانه علمی

Date:

No:

1976

$$\text{الف) } \frac{r}{\lambda_0} = \frac{\text{rad}}{\pi} \rightarrow \text{rad} = \frac{r}{\lambda_0} \cdot \frac{\pi}{1} = \frac{\pi r}{\lambda_0} \quad \text{ب) } \frac{\omega}{\pi} = \frac{\pi}{\lambda_0} \rightarrow \pi = \frac{\lambda_0 \cdot \omega}{\pi} = \sqrt{\lambda_0} \quad (1)$$

$$\text{ب) } \frac{r}{\lambda_0} = \frac{\text{rad}}{\pi} \rightarrow \text{rad} = \frac{r}{\lambda_0} \cdot \frac{\pi}{1} = \frac{\pi r}{\lambda_0} \quad \text{د) } \frac{f}{\pi} = \frac{\pi}{\lambda_0} \rightarrow \pi = \frac{\lambda_0 \cdot f}{\pi} = \lambda_0 \quad (2)$$

$$\frac{G \cdot \pi}{\lambda} = \frac{\pi}{\lambda_0} \rightarrow \pi = \frac{\lambda \cdot a}{\lambda_0} \rightarrow \pi = \frac{r}{\lambda_0} \cdot \frac{\pi}{a} \quad (3)$$

$$\frac{1 \cdot \omega a}{\pi} = \frac{\pi}{\lambda_0} \rightarrow \frac{\omega a}{\pi} \times \frac{\pi}{\lambda_0} = \pi = \frac{\lambda_0 \cdot \omega a}{\pi \cdot \lambda_0 \times \pi} = \frac{1 \cdot \omega a}{\pi} \quad (4)$$

$$1 \cdot \omega a + \pi \cdot \omega a + 1 \cdot a = \lambda_0 \rightarrow f \omega a = \lambda_0 \Rightarrow a = f \quad (5)$$

$$\text{الف) } \left(\frac{1}{\pi} \times \sqrt{\frac{\pi}{\pi}} \right) - \left(\frac{1}{\pi} \times \sqrt{\frac{\pi}{\pi}} \right) - 1 + \pi = 1 \quad (6)$$

$$\text{ب) } \frac{\frac{1}{\pi} + 1 + \pi}{\sqrt{\pi} - \frac{1}{\sqrt{\pi}}} = \frac{\frac{1\pi}{\pi}}{\frac{\pi}{\sqrt{\pi}}} = \frac{1\sqrt{\pi}}{\pi} \quad (7)$$

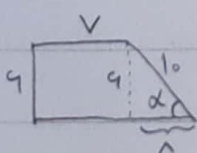
$$-\frac{1}{f} + \frac{\pi}{f} = \frac{\pi}{f} = \sin \theta \Rightarrow \sin \theta = \frac{\pi}{f} \rightarrow \frac{\pi}{f} = \frac{\sqrt{\pi}}{f} \Rightarrow \theta = f \quad (8)$$

$\tan f \alpha^\circ = 1$

$$\frac{\frac{\pi \sqrt{\pi}}{\pi} \left(\frac{\pi}{\pi} \right)}{\left(1 - \frac{1}{\pi} \right)^2} = \frac{\frac{f \sqrt{\pi}}{\pi}}{\frac{f}{\pi}} = \frac{f \sqrt{\pi}}{f} \rightarrow \tan \theta = \sqrt{\pi} \Rightarrow \theta = 9^\circ \quad (9)$$

$$\frac{y_0}{\pi \cdot \lambda_0} = \frac{\text{rad}}{\pi} \rightarrow \text{rad} = \frac{\pi}{\pi} \quad (10)$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \omega \rightarrow \sin \theta = \omega \cos \theta \rightarrow \frac{1 \cdot \omega \cos \theta - \cos \theta}{\omega \cos \theta - f \cos \theta} = 1 \quad (11)$$



$$\sin \alpha = \frac{4}{10} = \frac{\text{مقابل}}{\text{وتر}} \rightarrow \text{وتر} = 10 \quad \sqrt{100 - 36} = 8 = \text{مجاور} \quad (12)$$

$$\text{مجاور} = 10 + 10 + 10 + 4 = 34 \quad (13)$$

$\omega = \text{وتر} = \frac{1}{4}$ ضلع مقابل ۳
 $\sin 45^\circ = \frac{\sqrt{2}}{2} = \frac{\text{مقابل}}{\text{وتر}} = \frac{\omega}{\omega\sqrt{2}} \rightarrow \text{وتر} = \omega\sqrt{2}$
 $BD = \sqrt{AD^2 - AB^2} = \omega\sqrt{3}$
 $BC = \sqrt{AC^2 - AB^2} = \omega$
 $DC = BD - BC = \omega\sqrt{3} - \omega$

(۲) ✓

الف = ربع سفا ← ربع ۳ ← $\sin$ از ۵ میره به سمت ۱ - / $\cos$ از ۱ - میره به سمت منفی
 ب = ربع دفا ← ربع ۲ ← $\sin$ از ۱ میره به سمت ۵ / $\cos$ از ۵ میره به سمت ۱ -

(۲) ✓

در نامیه ۳ ← $\sin$ و $\cos$ هر دو منفی
 $\tan \alpha = \frac{\text{مقابل}}{\text{مجاور}} = \frac{1}{3} \rightarrow \text{مقابل} = 1 \text{ و } \text{مجاور} = 3$

(۱۵)

$\text{وتر} = \sqrt{(-3)^2 + (-1)^2} = \sqrt{10}$
 $\sin \alpha = \frac{\text{مقابل}}{\text{وتر}} = \frac{-1}{\sqrt{10}} = \frac{-\sqrt{10}}{10}$

(۲) ✓