

$$\frac{r_1}{180} = \frac{R \text{ rad}}{\pi} \rightarrow R \text{ rad} = \frac{r_1 \pi}{r_0}$$

$$1) \frac{120}{180} = \frac{n}{\pi} \rightarrow n = \frac{120 \pi}{180} \text{ rad}$$

$$2) \frac{\frac{\pi}{12}}{\pi} = \frac{n}{180} \rightarrow n = 15^\circ$$

$$3) \frac{\frac{\pi}{6}}{\pi} = \frac{n}{180} \rightarrow n = 30^\circ$$

$$\frac{\frac{a\pi}{\lambda}}{\pi} = \frac{n}{180} \rightarrow n = \frac{40a}{\lambda} = 22,5a$$

$$22,5a + 12,5a + 10a = 180$$

$$45a = 180$$

$$a = 4^\circ$$

$$\frac{120a}{r_0} = \frac{n}{180} \rightarrow n = \frac{120a}{r_0} = 12,5a$$

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

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

$$-\frac{1}{\sqrt{2}} \times \frac{1}{\sqrt{2}} + \frac{\sqrt{2}}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} = \sin^2 \theta$$

$$-\frac{1}{2} + \frac{2}{2} = \frac{1}{2} = \sin^2 \theta$$

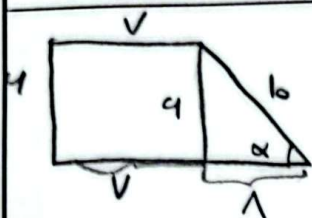
$$\sin \theta = \pm \frac{\sqrt{2}}{2} \rightarrow \pm \frac{\sqrt{2}}{2} \rightarrow \cos \theta = \pm \frac{\sqrt{2}}{2} \rightarrow \tan \theta = 1$$

$$\frac{r \times \frac{\sqrt{2}}{\sqrt{2}} (1 - \frac{1}{\sqrt{2}})}{1 - \frac{1}{\sqrt{2}}} = \frac{r \times \frac{\sqrt{2}}{\sqrt{2}} \times \frac{1}{\sqrt{2}}}{\frac{1}{\sqrt{2}}} = \frac{r \sqrt{2}}{\sqrt{2}} \rightarrow 45^\circ, 135^\circ \rightarrow \frac{\pi}{4}, \frac{3\pi}{4}$$

$$\frac{40}{180} = \frac{n}{\pi} \rightarrow n = 0,141 \pi$$

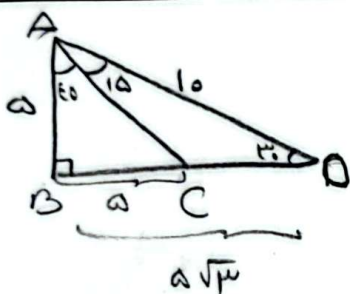
$$\frac{3 \sin \theta - \frac{\sin \theta}{a}}{\sin \theta - \frac{2 \sin \theta}{a}} = \frac{\frac{10 \sin \theta - \sin \theta}{a}}{\frac{a \sin \theta - 2 \sin \theta}{a}} = \frac{1 \sin \theta}{\sin \theta} = 1$$

$$\cos \theta = \frac{\sin \theta}{a}$$



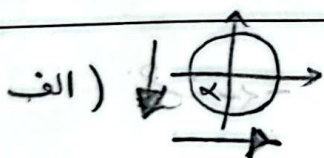
$$100 - 4 = 96 \rightarrow \Delta$$

$$\frac{4 + 4 + 10 + 10}{12} = 3\Delta$$



$$\frac{\sqrt{2}}{2} \times 10 = a\sqrt{2}$$

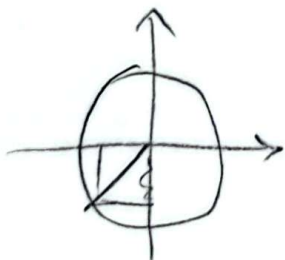
$$a\sqrt{2} - a = a(\sqrt{2} - 1)$$



$$\rightarrow 1 \cdot \mu_{up}$$



$$\gamma_{no}$$



$$\frac{\sin n}{\cos n} = \frac{1}{\mu} \rightarrow \cos n = \mu \sin n$$

$$\cos^2 n + \sin^2 n = 1$$

$$4 \sin^2 n + \sin^2 n = 1 \rightarrow 10 \sin^2 n = 1 \rightarrow \sin n = \pm \frac{1}{\sqrt{10}}$$