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

$$1) \frac{175}{180} = \frac{n}{\pi} \rightarrow n = \frac{175 \pi}{180} \text{ rad}$$

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

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

$$\frac{a\pi}{\pi} = \frac{n}{180} \rightarrow n = \frac{40a}{1} = 40a$$

$$22.5a + 17.5a + 10a = 180$$

$$40a = 180$$

$$a = 4.5^\circ$$

$$\frac{175a}{180} = \frac{n}{180} \rightarrow n = \frac{175a}{1} = 175a$$

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

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

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

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

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

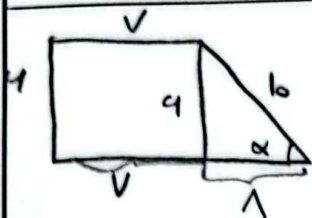
$$\frac{1 \times \frac{\sqrt{2}}{2} (1 - \frac{\sqrt{2}}{2})}{(1 - \frac{\sqrt{2}}{2})^2} = \frac{1 \times \frac{\sqrt{2}}{2} \times \frac{2-\sqrt{2}}{2}}{\frac{(2-\sqrt{2})^2}{4}} = \frac{\frac{\sqrt{2}}{2} (2-\sqrt{2})}{\frac{(2-\sqrt{2})^2}{4}} = \frac{2\sqrt{2}}{2-\sqrt{2}} \rightarrow \frac{\pi}{4},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

$$\rightarrow \frac{\frac{\sqrt{2}}{2}}{\frac{2-\sqrt{2}}{2}} = \sqrt{2}$$

$$\tan \theta = \sqrt{2} \quad \theta = \frac{\pi}{4}$$

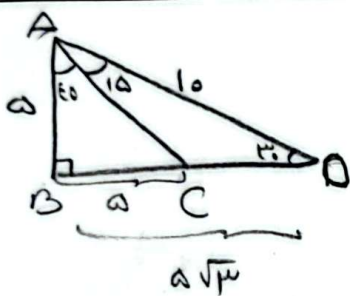
$$\frac{3 \sin \theta - \frac{\sin \theta}{a}}{\sin \theta - \frac{1}{a} \sin \theta} = \frac{\frac{10 \sin \theta - \sin \theta}{a}}{\frac{a \sin \theta - \frac{1}{a} \sin \theta}{a}} = \frac{10 \sin \theta}{\sin \theta} = 10$$

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



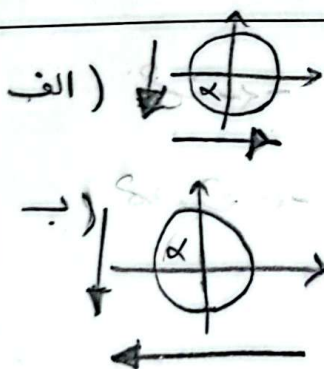
$$100 = 4^2 + 4^2 \rightarrow \lambda$$

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



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

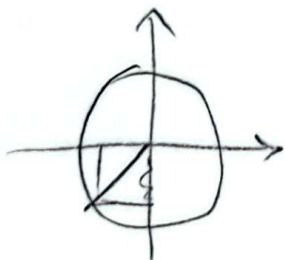
$$a\sqrt{2} - a = a(\sqrt{2} - 1)$$



$$\rightarrow 1 \text{ } \mu_{\text{up}} \text{ } \alpha$$

$$\gamma_{\text{up}} \text{ } \alpha$$

$$f(\cos), \alpha, \alpha$$



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

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

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