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$$P \sin \alpha + P_0 \sin \alpha - P_0 \rightarrow \sin \alpha + P_0 \sin \alpha - P_0 (\sin \alpha + 1) \quad (الف - 1)$$

$$\frac{1}{r} \quad -r \cdot X$$

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$$\frac{\sin^2 \alpha + \sin^2 \alpha}{\sin^2 \alpha} = \frac{\sin^2 \alpha + \cos^2 \alpha}{\sin^2 \alpha} \rightarrow \frac{\sin^2 \alpha (\sec^2 \alpha + 1)}{\sin^2 \alpha} = 1 \rightarrow \sec^2 \alpha = 2$$

حل المسألة

- 5

$$\rightarrow \alpha = \arccos \pm \frac{1}{\sqrt{2}} \rightarrow \alpha = 45^\circ \pm \frac{\pi}{4}$$

$$\frac{1}{\sin \alpha} + \cot \alpha = \frac{\sin \alpha}{1 + \cos \alpha} \rightarrow \frac{1 + \cos \alpha}{\sin \alpha} = \frac{\sin \alpha}{1 + \cos \alpha} \rightarrow \tan \alpha = \pm 1$$

$$\alpha = 45^\circ \pm \frac{\pi}{4} \rightarrow \alpha = \arccos \pm \frac{1}{\sqrt{2}} \rightarrow \alpha = 45^\circ, 135^\circ$$

$$\cos^2 \alpha - \sin^2 \alpha = 1 \rightarrow \cos^2 \alpha = 1 \rightarrow \alpha = \arccos \pm 1$$

$$\alpha = \arccos \pm 1 = 0^\circ, 180^\circ$$

الاجابة

$$\frac{1 - \tan \alpha}{1 + \tan \alpha} = \tan \alpha \rightarrow \tan(\frac{\pi}{4} - \alpha) = \tan \alpha \rightarrow \alpha = \arccos \pm \frac{1}{\sqrt{2}}$$

$$\alpha = 45^\circ \pm \frac{\pi}{4} \rightarrow \alpha = \arccos \pm \frac{1}{\sqrt{2}} \rightarrow \alpha = 45^\circ, 135^\circ$$

$$\cos^2 \alpha \neq 0 \rightarrow \alpha \neq \arccos \pm \frac{1}{\sqrt{2}} \rightarrow \alpha \neq 45^\circ, 135^\circ$$

$$\sqrt{1 - \sin^2 \alpha} = \sqrt{1 - \cos^2 \alpha} \rightarrow \sin \alpha = \cos \alpha \rightarrow \alpha = \arccos \pm \frac{1}{\sqrt{2}}$$

$$\rightarrow \cos(\alpha - \frac{\pi}{4}) = \cos \alpha \rightarrow \alpha - \frac{\pi}{4} = \arccos \pm \frac{1}{\sqrt{2}} \rightarrow \alpha = \arccos \pm \frac{1}{\sqrt{2}} + \frac{\pi}{4}$$

$$\alpha - \frac{\pi}{4} = \arccos \pm \frac{1}{\sqrt{2}} \rightarrow \alpha = \arccos \pm \frac{1}{\sqrt{2}} + \frac{\pi}{4} \rightarrow \alpha = 45^\circ, 135^\circ$$

الاجابة

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



$$\frac{3\pi}{4}, \frac{5\pi}{4}$$

1 - الف

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



$$\frac{\pi}{4}, \frac{5\pi}{4}$$

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