

هم مختار

تکلیف ۱۸

۲۵

در سال یونس

سؤال ۱) $\tan\left(\frac{3\pi}{4}\right) + \sin\left(\frac{7\pi}{4}\right) \cos\left(\frac{5\pi}{4}\right) = -1 + \left(-\frac{\sqrt{2}}{2} \cdot -\frac{\sqrt{2}}{2}\right) = -\frac{1}{2}$

پ) $\left(\tan \frac{5\pi}{4}\right) \left(\sin \frac{5\pi}{12}\right) + \cos \frac{4\pi}{12}$

$= \left(-\frac{\sqrt{3}}{2} \cdot -\frac{\sqrt{3}}{2}\right) - \frac{1}{2} = \frac{1}{2} - \frac{1}{2} = 0$

سؤال ۲) $\frac{3 \cos \alpha}{\cos \alpha (1 + \tan)} - \frac{\sin \alpha}{\sin \alpha (\cot + 1)} = \frac{3}{1 + \tan \alpha} - \frac{1}{\cot + 1}$

$\cot \alpha = 4 \quad \tan \alpha = \frac{1}{4} \rightarrow \frac{3}{\frac{5}{4}} - \frac{1}{5} = \frac{12}{5} - \frac{1}{5} = \frac{11}{5}$

سؤال ۳) $1 - \sin^2 = \cos^2 \rightarrow 1 - 4 \cos^2 = \cos^2$

$\rightarrow 1 = 5 \cos^2 \rightarrow \cos^2 = \frac{1}{5} \rightarrow \cos = \pm \frac{1}{\sqrt{5}}$

از آنجایی که در ربع سوم است و $\cos$ در آنجا منفی است $\rightarrow -\frac{1}{\sqrt{5}}$

سؤال ۴) $\cos = \sqrt{1 - \sin^2} = \sqrt{1 - \frac{9}{100}} = \frac{\sqrt{91}}{10} \xrightarrow{\text{خاصیت ۲}} -\frac{\sqrt{91}}{10}$

$\cos\left(\frac{3\pi}{4} + \alpha\right) = \cos \frac{3\pi}{4} \cos \alpha - \sin \frac{3\pi}{4} \sin \alpha$

$\rightarrow \left(-\frac{\sqrt{2}}{2} \cdot -\frac{\sqrt{91}}{10}\right) - \left(\frac{\sqrt{2}}{2} \cdot \frac{\sqrt{2}}{10}\right) = \frac{\sqrt{193}}{10} - \frac{1}{10} = \frac{192}{10}$

مسئله ب در صفحه ۴۳

سؤال ٥

$$\sin^2 + (\sin^2 + \cos^2) = \frac{1}{\mu}$$

$$\rightarrow \sin^2 = \frac{1}{\mu} \rightarrow \cos^2 = 1 - \sin^2 = \frac{1}{\mu} - \frac{1}{\mu} = \frac{1}{\mu}$$

$$\tan^2 = \frac{\sin^2}{\cos^2} = \frac{\frac{1}{\mu}}{\frac{1}{\mu}} = 1$$

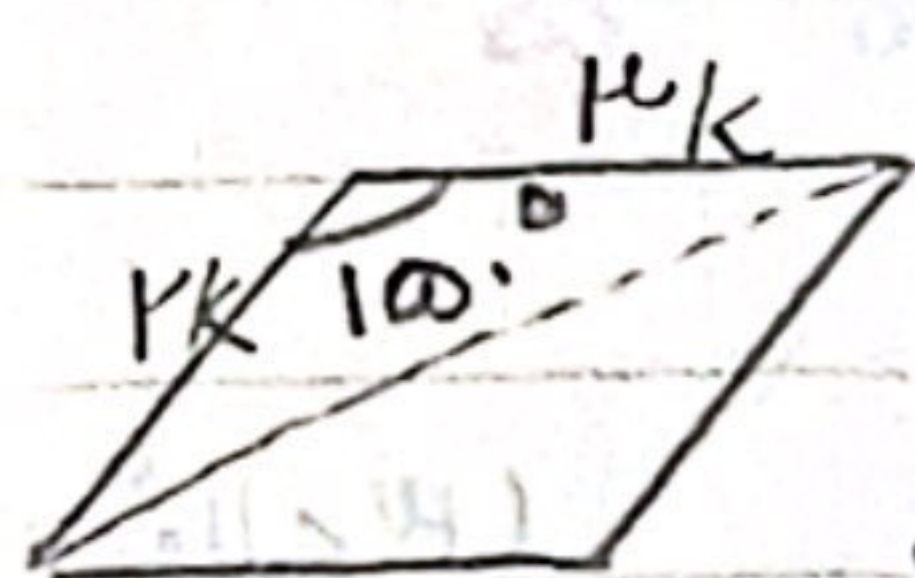
سؤال ٦

$$S_{\text{مست}} = \frac{9}{1} = 7 \times \sqrt{13} \times \frac{1}{1} \times \sin \alpha$$

$$\rightarrow \sin \alpha = \frac{\sqrt{13}}{1} \rightarrow \alpha \text{ بزرگ} = 12^\circ$$

$$\rightarrow \alpha \text{ کوچک} = 70^\circ$$

پایان



$$\sin 100^\circ = \frac{1}{1}$$

سؤال ٧

$$\omega^2 = \frac{1}{1} \times \frac{1}{1} \times \frac{1}{1} \times 13k \times 2k \rightarrow 10A = 7k^2$$

$$1A = k^2$$

$$\rightarrow \text{مساحت} = 13k + 2k + 13k + 2k = 10k$$

$$13\sqrt{2} = k$$

$$\rightarrow 10(13\sqrt{2}) = 130\sqrt{2}$$

سؤال ٨

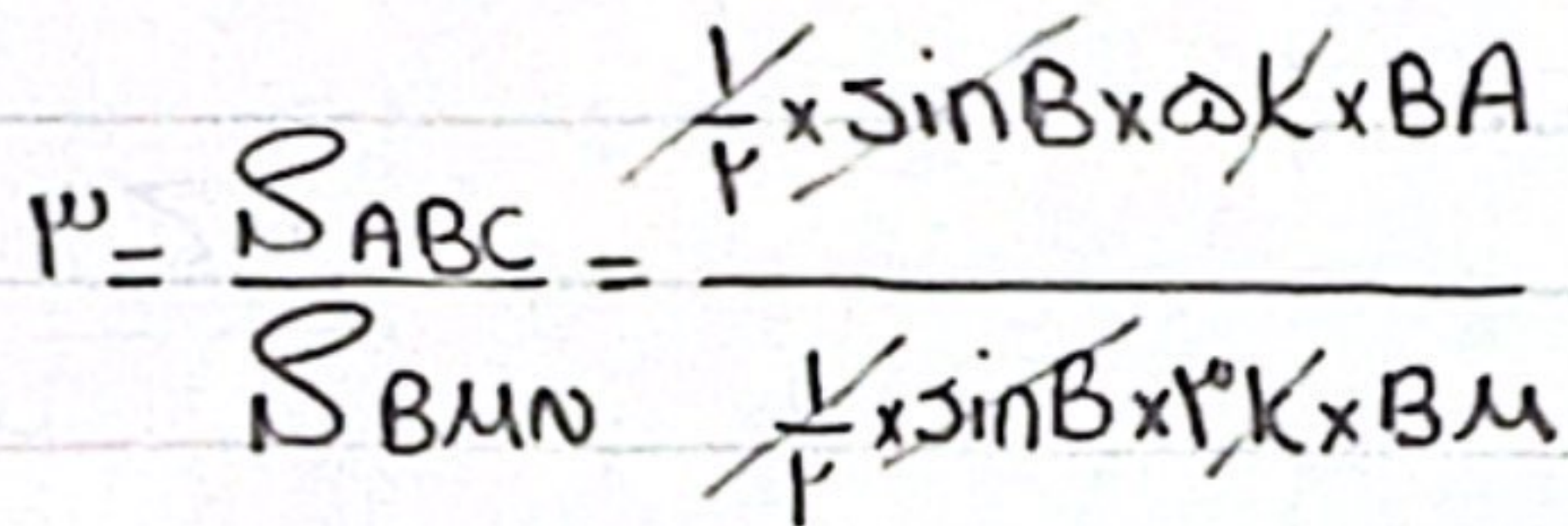
$$S_{ABC} - S_{ADE} = \frac{1}{1}$$

$$\rightarrow \left(\frac{1}{1} \times \sin A \times \omega \times \nu \right) - \left(\frac{1}{1} \times \sin A \times \gamma \times \epsilon \right)$$

$$= \frac{1}{1} \sin A (\omega - \epsilon) = \frac{1}{1} \sin A \rightarrow \frac{1}{1} \sin A = \frac{1}{\epsilon}$$

$$\sin A = \frac{1}{1}$$

$$\tan A = \frac{\sqrt{13}}{1} \leftarrow A = 10^\circ \leftarrow \text{زاویه حاده}$$


$$\rightarrow \frac{\mu}{1} = \frac{\omega_{BA}}{\nu_{BM}} \rightarrow \nu_{BM} = \omega_{BA}$$

سوال ۱۵)

$$\frac{1}{\cancel{\cos^p \alpha}} + \frac{\cancel{\sin^p}}{\cos^p \alpha} - \frac{p \cancel{\sin}}{\cos \alpha |\cos \alpha|} = \frac{1 + \cancel{\sin^p} + p \cancel{\sin}}{\cos^p}$$

$$\rightarrow \frac{-1}{|\cos \alpha|} = \frac{1}{\cos} \rightarrow \cos \phi \quad (Y)$$

$(1b(P) \rightarrow \text{moi})$

$$\frac{1}{\cos \psi} = 1 + \tan^2 \psi = 1 + \frac{1}{k^2 a^2} = \frac{\omega_0}{k a}$$

$$\rightarrow \cos = + \frac{y}{\omega \sqrt{\mu}}$$

$$\frac{1}{\sin \nu} = 1 + \cot^2 \nu \quad 1 + \tan^2 \nu = \sec^2 \nu$$

$$\rightarrow \sin z = \frac{1}{2\sqrt{y}}$$

مسئله سوال ۱۴

$$\sin\left(\frac{\omega\pi}{f} + a\right) = D$$

$$\Rightarrow \sin \frac{\omega \pi}{F} \cos \alpha + \sin \frac{\omega \pi}{E} \cos \alpha$$

$$= \left(-\frac{\cancel{\sqrt{r}}}{r} \cdot \frac{v}{\omega \cancel{\sqrt{r}}} \right) + \left(-\frac{\cancel{\sqrt{r}}}{r} \cdot \frac{1}{\omega \cancel{\sqrt{r}}} \right)$$

$$-\frac{V}{10} - \frac{1}{10} = -\frac{5}{10}$$