

سوال ۵ <

$$r \sin^2 \alpha + \cos^2 \alpha = \frac{r}{r} = 1 \quad \sin^2 \alpha + \cos^2 \alpha = 1$$

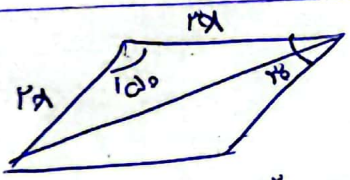
$$\sin^2 \alpha + \frac{\sin^2 \alpha + \cos^2 \alpha}{1} = \frac{r}{r} \quad \sin^2 \alpha = \frac{r}{r} - \frac{r}{r} = 0 \quad \sin^2 \alpha = \frac{1}{r}$$

$$\sin^2 \alpha = 1 - \cos^2 \alpha \quad \frac{1}{r} = 1 - \cos^2 \alpha \quad \cos^2 \alpha = \frac{r}{r} - \frac{1}{r} = \frac{r-1}{r}$$

$$\tan^2 \alpha = \frac{\sin^2 \alpha}{\cos^2 \alpha} = \frac{\frac{1}{r}}{\frac{r-1}{r}} = \frac{1}{r-1}$$

سوال ۶ <

$\Delta F \div r = P \div V$



$$r_A \times r_B \times \frac{1}{r} \times \sin 100 = rV \quad \frac{r_A r_B}{r} = rV \quad r^2 = \frac{r_A r_B}{r} = 4 \quad r = \sqrt{16}$$

$$\sqrt{16} = \sqrt{4 \times 4} = 4 \sqrt{2}$$

$$(r \sin \alpha + r \cos \alpha) \times r = 10 \sqrt{16} = 40 \sqrt{2}$$

سوال ۷ <

$\sin \alpha = r \cos \alpha$

$$\frac{\sin \alpha}{-r} = \frac{r \cos \alpha}{-r} \quad \sin \alpha = -r \cos \alpha$$

$$\sin^2 \alpha = 1 - \cos^2 \alpha \quad r^2 \cos^2 \alpha = 1 - \cos^2 \alpha \quad r^2 \cos^2 \alpha + \cos^2 \alpha = 1 \quad \cos^2 \alpha (r^2 + 1) = 1$$

$$\cos^2 \alpha = \frac{1}{r^2 + 1} \quad \cos \alpha = \pm \frac{1}{\sqrt{r^2 + 1}} = \frac{1}{\sqrt{5}} = \frac{1}{\sqrt{5}}$$

$$\sin a = \frac{\sqrt{r}}{10}$$

سؤال ١٤

$$\sin^2 a = 1 - \cos^2 a \quad \frac{r}{100} = 1 - \cos^2 a$$

$$\cos^2 a = 1 - \frac{r}{100} = \frac{91}{100} = \cos^2 a = \frac{\sqrt{91}}{10} = \cos a$$

(الف)

$$\begin{aligned} & \cos \frac{11\pi}{12} \cos a + \sin \frac{11\pi}{12} \sin a \\ & \sim -\frac{\sqrt{r}}{r} \frac{\sqrt{91}}{10} + \frac{\sqrt{r}}{r} \frac{\sqrt{r}}{10} \\ & = \frac{-r}{10} \end{aligned}$$

$$\tan a = \frac{1}{\sqrt{r}} \quad \sin \frac{11\pi}{12} \times \sin a + \cos \frac{11\pi}{12} \times \cos a$$

(ب)

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

$$\cos^2 a = \frac{r}{100} = \frac{1}{100} \quad \cos a = \frac{1}{10}$$

$$= \frac{\sin a}{\cos a} = \frac{\frac{1}{10}}{\frac{1}{100}} = 10$$

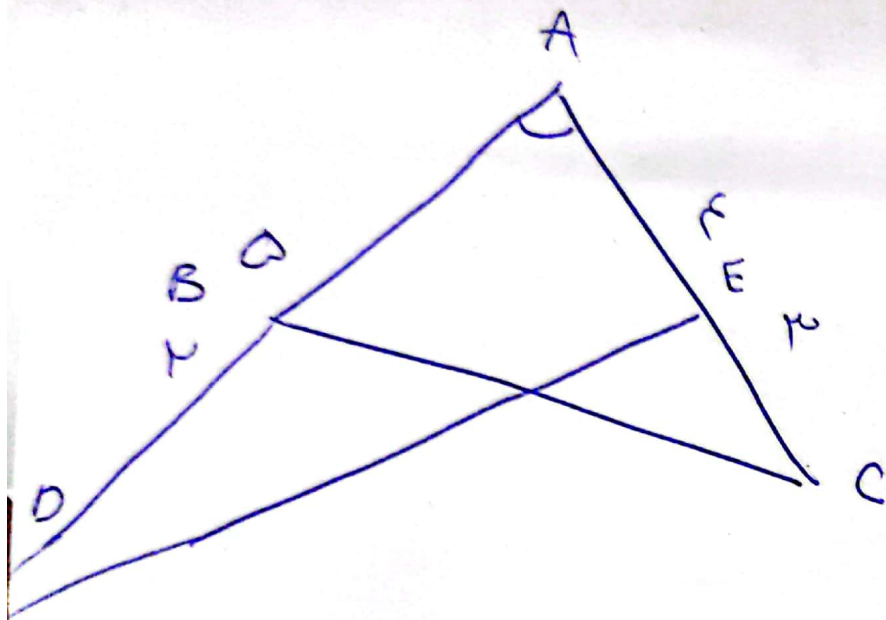
$$\frac{\sin a}{\cos a} = \frac{\frac{1}{10}}{\frac{1}{100}} = 10$$

$$\frac{11\pi}{12} = \frac{\pi}{12} + \frac{10\pi}{12}$$

$$\frac{-\sqrt{r}}{r\sqrt{100}} + \frac{\sqrt{r}}{r\sqrt{100}} = \frac{r}{r\sqrt{100}}$$

$$\frac{-\sqrt{r}}{r\sqrt{100}} \quad r\omega = \sqrt{a^2 + r^2} = \sqrt{a^2 + r^2}$$

$$\frac{-\sqrt{r}}{r\sqrt{100}} = -\frac{1}{10}$$



← 1 سوال

$$S_{ABC} = \underbrace{v \times \frac{rA}{r}}_{\frac{rA}{r}} \times \sin A$$

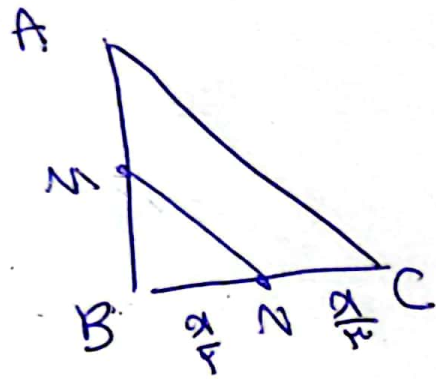
$$S_{ADE} = \underbrace{\omega \times v \times \frac{1}{r}}_{\frac{rA}{r}} \times \sin A$$

$$\frac{rA}{r} \sin A - \frac{rA}{r} \sin A = 1/vA$$

$$1/vA = \frac{rA}{r} = \frac{rA}{r} = \frac{v}{r}$$

$$\sin A \left(\underbrace{\frac{rA}{r} - \frac{rA}{r}}_{\frac{rA}{r}} \right) = \frac{v}{r} \quad \sin A = \frac{rA}{r} \times \frac{rA}{r} = \sin A = \frac{1}{r}$$

$$\cos^2 A = 1 - \sin^2 A \quad \cos^2 A = \frac{r}{r} \quad \tan^2 A = \frac{1}{r} = \frac{1}{r} \quad \Rightarrow \boxed{\tan A = \frac{1}{r}}$$



$$\frac{BM}{AM}$$

Universe < 9 New

$$\angle B N = \angle N C \quad \alpha = \angle N C \quad = \angle N C = \frac{\alpha}{4}$$

$$\cancel{\sin B} \times \cancel{\frac{1}{p}} \times B M \times \frac{\alpha}{4} = \cancel{\sin B} \times \cancel{\frac{1}{p}} \times A B \times \frac{\alpha}{4}$$

$$B M \frac{\alpha}{4} = A B \frac{\alpha}{4} \quad \Rightarrow \quad B M \alpha = B M \frac{\alpha}{4} + A M \frac{\alpha}{4}$$

$$B M \alpha - B M \frac{\alpha}{4} = A M \frac{\alpha}{4} \quad \Rightarrow \quad B M \left(\frac{4\alpha}{4} - \frac{\alpha}{4} \right) = A M \frac{\alpha}{4}$$

$$B M \frac{3\alpha}{4} = A M \frac{\alpha}{4}$$

$$3 B M = A M \quad \Rightarrow \quad \frac{B M}{A M} = \frac{1}{3}$$

$$\frac{\frac{1}{3}}{1} = \boxed{\frac{1}{3}}$$

1A

B gaw Chapitres

$$\cot \alpha = \frac{\cos \alpha}{\sin \alpha}$$

$$\cot \alpha = r \quad \checkmark \quad r \text{ جيب}$$

$$\cos \alpha = r \alpha$$

$$\sin \alpha = \alpha$$

$$\frac{r \cos \alpha - \sin \alpha}{\cos \alpha + \sin \alpha} = \frac{r \alpha - \alpha}{r \alpha + \alpha} = \frac{11}{\alpha}$$

$$\frac{1}{\sqrt{\cos^2 \alpha}} - \tan \alpha = \frac{1 + \sin \alpha}{|\cos \alpha|}$$

$$\frac{|\sin \alpha|}{\cos \alpha} = -\frac{1}{\cot \alpha}$$

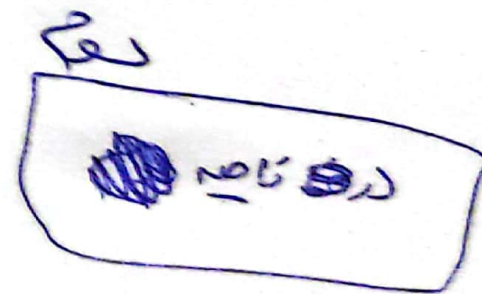
$$\frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{|\cos \alpha|} \Rightarrow \cos \alpha = -$$

$$\frac{|\sin \alpha|}{\cos \alpha} = \frac{-\cos \alpha}{\sin \alpha}$$

$$\Rightarrow \cos \alpha = - \sin \alpha = \frac{1}{\sqrt{2}}$$

$$|\sin \alpha| = -\frac{\cos^2 \alpha}{\sin \alpha}$$

سوال 10



$$\text{وإ) } \tan \frac{11\pi}{\pi} + \sin \frac{10\pi}{\pi} \times \cos \frac{13\pi}{\pi} = -1 + \left(-\frac{\sqrt{r}}{r}\right) \left(-\frac{r}{r}\right) \left[\frac{-1}{r}\right] \leq 1 \text{ سؤال}$$

$$\tan \frac{11\pi}{\pi} \times \frac{10}{\pi} = r \sin \theta \rightarrow r \sin \theta + 13\pi = 4 \tan 13\pi = -1$$

$$\sin \frac{10\pi}{\pi} \times \frac{10}{\pi} = 4 \cos \theta \rightarrow r \cos \theta + 13\pi = 4 \sin 13\pi = -\frac{\sqrt{r}}{r}$$

$$\cos \frac{13\pi}{\pi} \times \frac{10}{\pi} = \omega \cos \theta \rightarrow r \cos \theta + 13\pi = 4 \cos 13\pi = -\frac{\sqrt{r}}{r}$$

$$\text{ج) } \frac{10\pi}{\pi} = 2\pi + \frac{\pi}{\pi}, \quad \frac{11\pi}{\pi} = \pi - \frac{\pi}{\pi}, \quad \frac{10\pi}{\pi} = 3\pi + \frac{\pi}{\pi}$$

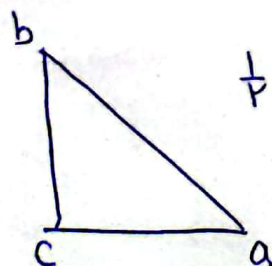
$$\tan \left(\frac{10\pi}{\pi} \right) = \tan \frac{\pi}{\pi} = \tan \left(\pi - \frac{\pi}{\pi} \right) = -\tan \left(\frac{\pi}{\pi} \right) = -\frac{\sqrt{r}}{r}$$

$$\sin \left(\frac{11\pi}{\pi} \right) = \sin \left(-\frac{\pi}{\pi} \right) = -\sin \left(\frac{\pi}{\pi} \right) = -\frac{\sqrt{r}}{r}$$

$$\cos \left(\frac{10\pi}{\pi} \right) = \cos \left(\pi + \frac{\pi}{\pi} \right) = \cos \left(\frac{r\pi}{\pi} \right) = -\frac{1}{r}$$

$$-\frac{\sqrt{r}}{r} \times -\frac{\sqrt{r}}{r} + -\frac{1}{r} = \frac{r}{r} - \frac{1}{r} = 0$$

~~$$\frac{\sin a}{\cos a} = \frac{r \cos a}{\cos a} = \tan a = r$$~~



$$\frac{1}{r} \times ab \times ac \times \sin a = \frac{1}{r} \times 4 \times r \times \sin a = r \sin a$$

$$r \sin a \times \sin a = r \sin a = \frac{\sqrt{r}}{r}$$

$$a = 40^\circ \text{ و } 140^\circ$$

سؤال 4 <