

$\text{ii) } \tan\left(10\pi - \frac{\pi}{k}\right) + \sin\left(10\pi - \frac{\pi}{k}\right) \cos\left(10\pi + \frac{\pi}{k}\right)$

 وردہ حالی اعلیٰ
 (مسئلہ ۱)

$\Rightarrow \tan\left(\pi - \frac{\pi}{k}\right) + \sin\left(\pi - \frac{\pi}{k}\right) \cos\left(\pi + \frac{\pi}{k}\right)$

$\tan\left(\frac{\pi}{k}\right) = \sin\left(\frac{\pi}{k}\right) \cos\left(\frac{\pi}{k}\right) = -1 + \left(\frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2}\right) =$
 $\Rightarrow -1 + \frac{1}{2} = -\frac{1}{2}$

سوال ۱ - ب) $\tan\left(\pi - \frac{\pi}{4}\right) \sin\left(\pi - \frac{\pi}{\mu}\right) + \cos\left(\pi + \frac{\pi}{\mu}\right)$

$$\tan\left(\pi - \frac{\pi}{4}\right) \sin\left(\pi - \frac{\pi}{\mu}\right) + \cos\left(\pi + \frac{\pi}{\mu}\right)$$

$$= -\tan\left(\frac{\pi}{4}\right) - \sin\left(\frac{\pi}{\mu}\right) - \cos\left(\frac{\pi}{\mu}\right) = -\frac{\sqrt{\mu}}{\mu} \times -\frac{\sqrt{\mu}}{\mu} - \frac{1}{\mu} = \frac{1}{\mu} = \frac{1}{4} = \frac{\mu}{4}$$

↳ = 0

$$\frac{\cos x - \sin x}{\cos x + \sin x} \div \sin x \rightarrow$$

$$\frac{\cot x - 1}{\cot x + 1}$$

$$= \frac{12-1}{5} = \frac{11}{5} \quad \text{سری ۲}$$

تعطیل

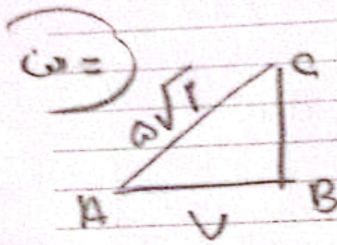
4/1/2020

$$\sin^2 \alpha + \cos^2 \alpha = 1 \quad (r \cos \alpha)^2 + \cos^2 \alpha = 1 \quad \text{سوال ۳}$$

$$\rightarrow r^2 \cos^2 \alpha + \cos^2 \alpha = 1 \Rightarrow 2 \cos^2 \alpha = 1 \Rightarrow \cos^2 \alpha = \frac{1}{2}$$

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

$$\left(\frac{-\sqrt{2}}{2} \right) = -\frac{1}{\sqrt{2}} = \text{در ربع سوم} \leftarrow$$



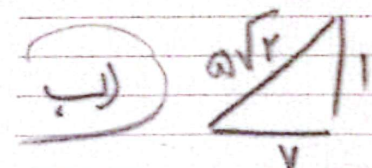
AB $\Rightarrow \omega_0 = 1 + m \cdot r$ ($m = V$) (سؤال ۱۴)

$$\cos \alpha = \frac{V}{\omega \sqrt{r}} \quad \sin \alpha = \frac{1}{\omega \sqrt{r}}$$

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

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

$$\Rightarrow \left(\frac{-\sqrt{r}}{r} \times \frac{V}{\omega \sqrt{r}}\right) - \left(\frac{\sqrt{r}}{r} \times \frac{1}{\omega \sqrt{r}}\right) = \frac{V}{10} - \frac{1}{10} = \frac{4}{10} = \frac{2}{5}$$



$$\sin \alpha = \frac{1}{\omega \sqrt{r}} \quad \cos \alpha = \frac{V}{\omega \sqrt{r}}$$

$$\frac{14\pi}{r} = \pi + \frac{\pi}{r} = \frac{\pi}{r} + \pi$$

$$\sin\left(\frac{\pi}{r} + \alpha\right) = \left(\sin \frac{\pi}{r} \times \cos \alpha\right) + \left(\sin \alpha \times \cos \frac{\pi}{r}\right)$$

$$\Rightarrow \left(\frac{-\sqrt{r}}{r} \times \frac{V}{\omega \sqrt{r}}\right) + \left(\frac{1}{\omega \sqrt{r}} \times \frac{-\sqrt{r}}{r}\right) = \frac{-V}{10} + \frac{-1}{10} = \frac{-11}{10} = \frac{-11}{10}$$

$$\sin^2 \alpha + \sin^2 \alpha + \underbrace{\cos^2 \alpha}_1 = \frac{16}{16} \Rightarrow \sin^2 \alpha = \frac{16}{16} - 1 = \frac{1}{16} \quad (\text{سوال 5})$$

$$\Rightarrow \sin^2 \alpha + \cos^2 \alpha = 1 \Rightarrow \cos^2 \alpha = 1 - \sin^2 \alpha = 1 - \frac{1}{16} = \frac{15}{16}$$

$$\tan^2 \alpha = \frac{\sin^2 \alpha}{\cos^2 \alpha} = \frac{\frac{1}{16}}{\frac{15}{16}} = \frac{1}{15} \quad \left(\frac{1}{15} \right)$$

$$\frac{1}{\sqrt{15}} \times \sqrt{15} \times \sin \alpha = \frac{1}{\sqrt{15}}$$

$$\sqrt{15} \times \sin \alpha = \sqrt{15} \times \frac{1}{\sqrt{15}} \quad (\text{سوال 4})$$

$$\Rightarrow \sin \alpha = \frac{\sqrt{15}}{\sqrt{15}} \Rightarrow \sin 46^\circ, 140^\circ \quad \frac{140}{140} = 1 \quad \underline{\underline{2 \text{ جواب}}}$$

شهادت حضرت امام جعفر صادق علیه السلام - تعطیل - روز بزرگداشت شیخ صدوق

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یکشنبه

۱۶ اردیبهشت

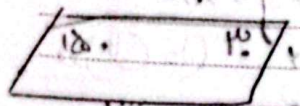
۲۶ شوال ۱۴۴۵

5 May 2024

$$P = 15\sqrt{2} \times 2 = 30\sqrt{2}$$

$$r_m = r(1/\sqrt{2}) = 9\sqrt{2}$$

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$$r_m \times r \times \sin 15 = \Delta K$$

سوال ۷

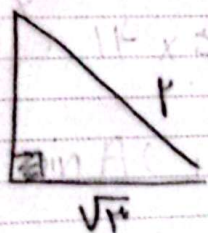
$$r_m \times r \times \frac{1}{r} = \Delta K \Rightarrow r_m \times r = \Delta K \times r$$

$$r_m = \Delta K \times r \Rightarrow r_m = 1/2 \Rightarrow r = 2 \Rightarrow r_m = 1/\sqrt{2} \Rightarrow r = 1/\sqrt{2}$$

$$\frac{1}{r} \times \Delta K \times V \times \sin A = \frac{1}{r} \times F \times V \times \sin A \Rightarrow 1/V \Delta$$

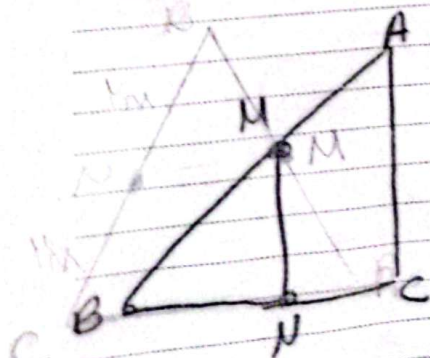
سوال ۸

$$1/V \Delta \sin A = 1/E \sin A = 1/P \Delta \sin A \rightarrow 1/V \Delta \rightarrow \sin A = 1/r$$



$$\tan z = \frac{\sin}{\cos} = \frac{1}{\sqrt{r}} = \frac{\sqrt{r}}{r}$$

$$\sin z = \frac{1}{r}$$



$$r_{BN} = r_{NE} \Rightarrow BN = \frac{1}{2} NC$$

$$\frac{S_{ABC}}{S_{BMN}} = \frac{1}{4} \Rightarrow \frac{\frac{1}{2} \times AB \times \frac{1}{2} \times \sin B}{\frac{1}{2} \times MB \times \frac{1}{2} \times \sin B} = \frac{1}{4} \Rightarrow \frac{AB}{MB} = \frac{1}{4}$$

$$\Delta AB = 4 MB \Rightarrow MB = \frac{\Delta}{4} AB \Rightarrow MA = \frac{3}{4} AB$$

$$\frac{BM}{AM} = \frac{\frac{\Delta}{4} AB}{\frac{3}{4} AB} = \frac{\Delta}{3}$$

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دوشنبه

۱۷ اردیبهشت

۲۷ شوال ۱۴۴۵

6 May 2024

$$\frac{|\sin \alpha|}{\cos \alpha} = -\frac{\sin \alpha}{\cos \alpha} \Rightarrow \sin \alpha < 0$$

سوال ۱۰

$$\frac{1}{|\cos \alpha|} - \frac{1 + \sin \alpha}{|\cos \alpha|} = \frac{\sin \alpha}{|\cos \alpha|} \xrightarrow{\text{ضرب در } |\cos \alpha|} -\frac{\sin \alpha}{\cos \alpha} \Rightarrow \cos \alpha < 0$$

$\sin \alpha < 0$ و $\cos \alpha < 0 \Rightarrow$ نامر سوم