

Subject _____

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Date: / /

ریاضی تطبیقی " تمام حاد و منفرجه کمان - بازهم دفتر B - کلاس 28

I, $\frac{1}{\sqrt{\cos^2 \alpha}} - \frac{1}{\cot \alpha} = \frac{1 - \sin \alpha}{|\cos \alpha|}$, $\cot \alpha = \frac{\cos \alpha}{\sin \alpha}$ (II) 1

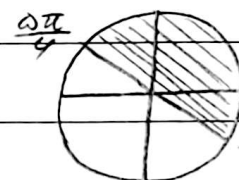
II: $\frac{\cos \alpha}{\sin \alpha} = \frac{\cos \alpha}{|\sin \alpha|} \rightarrow \sin \alpha > 0$

قبول اول شوبی

$\frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 - \sin \alpha}{|\cos \alpha|} \rightarrow \cos \alpha > 0$

$-\frac{\pi}{12} < n < \frac{0\pi}{12} \rightarrow -\frac{\pi}{12} < 2n < \frac{0\pi}{12} \rightarrow -\frac{1}{2} < \sin 2n < 1$ 2

قبول شوبی



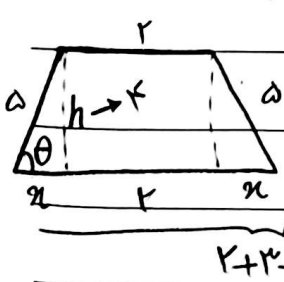
$-\frac{1}{2} < \frac{m-1}{2} < 1 \Rightarrow -1 < m-1 < 2 \Rightarrow -1 < m < 3$

$\frac{3\pi}{4} < 2n < \frac{5\pi}{4} \Rightarrow \frac{3\pi}{8} < n < \frac{5\pi}{8} \Rightarrow \sin 2n = -\frac{1}{2} \rightarrow 1 + \sin(2n) = \frac{1}{2}$ 3

$= \cos^2 n + \sin^2 n + 2 \sin n \cos n = \frac{1}{2} \Rightarrow (\sin n + \cos n)^2 = \frac{1}{2} \rightarrow \sin n + \cos n = \pm \frac{\sqrt{2}}{2}$

$\cos n + \sin n = -\frac{\sqrt{2}}{2}$ قبول

$\Rightarrow \frac{1}{(-\frac{\sqrt{2}}{2})} (\frac{1}{2}) = \frac{-1}{\sqrt{2}}$ قبول شوبی $\rightarrow -\frac{1}{\sqrt{2}}$



$\cos \theta = \frac{r}{\lambda} \times \frac{\lambda}{1} \rightarrow \lambda = r$

$\cos \theta = \frac{r}{\lambda} = \frac{?}{\lambda} \rightarrow ? = r$ $\sin \theta = \frac{h}{\lambda} = \frac{?}{\lambda} \rightarrow ? = h$

$r+r+r=\lambda$

$S = \frac{(\lambda+r) \times h}{2} = \frac{(r+r) \times r}{2} = r^2$ قبول شوبی

NOTEBOOK

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$$\tan(1A) \tan(-1A) - \sin(1A) \cos(1A) = k \cos^2 A \quad (5)$$

$$\tan\left(\frac{1\pi}{r} + 1A\right) \times (-\tan(\pi - 1A)) - \sin(4\pi + 1A) \cos\left(\frac{1\pi}{r} - 1A\right)$$

$$= \underbrace{-\cot 1A \times \tan 1A}_{-1} - \sin 1A \times (-\sin 1A) = -1 + \sin^2 1A = -\cos^2 1A$$

$$k \cos^2 1A = -\cos^2 1A \rightarrow \boxed{k = -1}$$

$$\sqrt{r} \cos(1A) \sin(1A) - \sqrt{r} \sin(1A) \cos(1A) = A \quad (6)$$

$\cos 1A$

$$\sqrt{r} \times \left(-\frac{\sqrt{r}}{r}\right) \times \sin\left(\frac{1\pi}{r} - 1A\right) - \sqrt{r} \left(\frac{\sqrt{r}}{r}\right) \times \cos(\pi - 1A)$$

$\cos 1A$

$$\frac{-\frac{r}{r} \times (-\cos 1A) - \frac{r}{r} \times (-\cos 1A)}{\cos 1A} = \frac{\frac{r}{r} \cos 1A + \cos 1A}{\cos 1A}$$

$$= \frac{\frac{r}{r} \cos 1A}{\cos 1A} = \left(\frac{r}{r}\right) \text{ "جواب"}$$

$$f(n) = 14 \times \frac{1 + \cos 9n}{r} \times \frac{1 + \cos 11n}{r} + \frac{1 + \cos 15n}{r} \times \frac{1 + \cos 17n}{r} \quad (7)$$

$$\rightarrow f(n) = (1 + \cos 9n)(1 + \cos 11n)(1 + \cos 15n)(1 + \cos 17n) \quad (8)$$

$$\rightarrow f\left(\frac{\pi}{14}\right) = \left(1 + \frac{\sqrt{r}}{r}\right) \left(1 + \frac{1}{r}\right) \left(1 - \frac{1}{r}\right) \left(1 - \frac{1}{r}\right) = \frac{9 + 14\sqrt{r}}{14} \text{ "جواب"}$$

NOTEBOOK

$$\frac{1 - \sin x}{1 + \sin x} = r \rightarrow r + \sin x = 1 - \sin x \rightarrow 2 \sin x = 1 - r \rightarrow \sin x = \frac{1-r}{2} \quad (8)$$

$$\frac{\sin x}{1 + \tan^2 x} = \frac{r \tan x}{1 + \tan^2 x} = \frac{1-r}{2} \rightarrow -1 \cdot \tan x = \frac{r + r \tan^2 x}{1} \quad (9)$$

$$\rightarrow \frac{r \tan^2 x}{1} - 1 \cdot \tan x + 1 = 0 \xrightarrow{\times r} (r \tan x)^2 + 1 \cdot (r \tan x) + 1 = 0$$

گلوگول

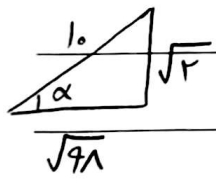
$$\rightarrow (r \tan x + 1)(r \tan x + 1) \rightarrow \tan x = -\frac{r}{1}, -\frac{1}{r}$$

-r جو کتا

$$\left\{ \frac{\sin \theta}{1 - \cos \theta} + \frac{1 + \cos \theta}{\sin \theta} = k \cot \left(\frac{\theta}{r} \right) \right\} \rightarrow \frac{\sin x}{1 + \cos x} = \frac{1 - \cos x}{\sin x} = \tan \left(\frac{\alpha}{r} \right) \quad (9)$$

گلوگول $k=r$

$$\Rightarrow \frac{1 + \cos x}{\sin x} = \frac{\sin x}{1 - \cos x} = \cot \left(\frac{\alpha}{r} \right) \rightarrow \cot \left(\frac{\alpha}{r} \right) + \cot \left(\frac{\alpha}{r} \right) = r \cot \left(\frac{\alpha}{r} \right) = k \cot \left(\frac{\alpha}{r} \right)$$



$$\cos \left(\frac{11\pi}{r} + \alpha \right) = \cos \left(r\pi - \frac{\pi}{r} + \alpha \right) = \cos \left(r\pi - \left(\frac{\pi}{r} - \alpha \right) \right) \quad (10)$$

$$\cos \alpha = \pm \frac{\sqrt{4A}}{1}$$

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

$$\rightarrow - \left(\frac{\sqrt{r}}{r} \times \frac{\sqrt{4A}}{1} + \frac{\sqrt{r}}{r} \times \frac{\sqrt{r}}{1} \right) = - \left(-\frac{1}{r} \right) = \frac{r}{\omega}$$

گلوگول