

سوال ۲۸
 سؤال منطبق
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بازدم دفتر A

تکلیف شماره ۲۸

ستایش خرابار

$$\frac{1}{\sqrt{\cos^2 x}} - \frac{1}{\cot x} = \frac{1}{|\cos x|} - \frac{\sin x}{\cos x} = \frac{1 - \sin x}{\cos x}$$

پس از دال |cos x| با + نشانه

ربع اول $\rightarrow \cot x > 0$

$$\cot x = \frac{\cos x}{|\sin x|} = \frac{\cos x}{\sin x} = \cot x$$

ربع اول بازدم ! * * * * * (N) * * * * *

$$-\frac{\pi}{12} < x < \frac{5\pi}{12} \xrightarrow{x^2} \frac{-\pi}{9} < 2x < \frac{5\pi}{9} \quad \sin\left(\frac{-\pi}{9}\right) = -\frac{1}{2}$$

$\sin 0 = 0$ $\sin \frac{\pi}{9} = 1$, $\sin \frac{5\pi}{9} = \frac{1}{2}$

$$\frac{1}{2} < \sin 2x \leq 1 \rightarrow -\frac{1}{2} < \frac{m}{2} \leq 1 \rightarrow \boxed{-1 < m \leq 2}$$

$\tan x + \cot x = 2$ $\frac{\sin^2 x + \cos^2 x}{\sin x \cos x} = 2 \rightarrow SC = -\frac{1}{2}$ $\sin = S$
 $\cos = C$

$\frac{\pi}{12} < 2x < \frac{5\pi}{12} \rightarrow \frac{\pi}{6} < x < \frac{5\pi}{12} \rightarrow |\cos x| > \sin x$

$$S^2 + C^2 = (S+C)(S^2 + C^2 - SC) = \left(-\frac{\sqrt{2}}{2}\right) \left(\frac{\sqrt{2}}{2}\right) = \frac{-\sqrt{2}}{2}$$

$S + C = A \rightarrow S^2 + C^2 + 2SC = A^2 \rightarrow A^2 = 1 - \sqrt{2} = \frac{1-\sqrt{2}}{2}$

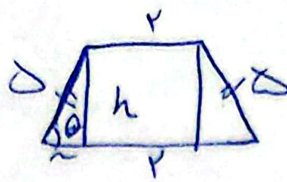
$A < 0$
 $2C \cup 2S$

$A = -\frac{\sqrt{2}}{2}$ $A = \frac{1-\sqrt{2}}{2}$

P. n 1 . . .

$$C = \frac{r}{l_0} = \frac{r}{D} \quad \left(\sqrt{r^2 = l_0^2} \right)$$

$$S = \frac{l_0 \times r}{r} = r_0$$



$$h^2 + r^2 = d^2 = \phi h = \phi$$

$$\tan \pi \delta = \tan(\pi \phi + \delta) = -\cot \delta$$

$$\tan(-\pi \delta) = -\tan(\pi \phi - \delta) = \tan \delta$$

$$-\sin(\pi \delta) = -\sin(\pi \phi + \delta) = -\sin \delta$$

$$\cos \pi \delta = \cos(\pi \phi - \delta) = -\sin \delta$$

Job $\rightarrow -\cot \delta = \tan \delta + \sin^2 \delta \quad \text{and} \quad -1 + \sin^2 \delta$

$$\sin^2 \delta = 1 - \cos^2 \delta \quad -1 + 1 - \cos^2 \delta = -\cos^2 \delta$$

$$k \cos^2 \delta = -\cos^2 \delta \Rightarrow k = -1$$

$$C 210 = C(180 + 30) = -\cos 30 = -\frac{\sqrt{3}}{2}$$

$$S 243 = S(270 - 27) = -\cos 27$$

$$S 135 = S(180 - 45) = S 45 = \frac{\sqrt{2}}{2}$$

$$C 153 = C(180 - 27) = -C 27$$

$$\zeta = \frac{\sqrt{3}}{2} \times \frac{-\sqrt{3}}{2} \times (-C 27) - \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} \times -C 27 = \frac{3}{2} C 27 + C$$

$$= \left(\frac{5}{2} \cos 27 \right) \quad \left(\zeta = \frac{5}{2} \right)$$

$$C^2 32 \rightarrow \cos^2 \frac{\pi}{12} \quad a = \frac{\pi}{36}$$

$$\cos 2a = 2 \cos^2 a - 1 \rightarrow 2 \cos^2 \frac{\pi}{12} = \frac{\sqrt{3}}{2} + 1 \Rightarrow \cos^2 \frac{\pi}{12} = \frac{\sqrt{3} + 1}{2}$$

$$\cos^2 6a \rightarrow \cos^2 \frac{\pi}{6} = \left(\frac{\sqrt{3}}{2} \right)^2 = \frac{3}{4}$$

$$\cos^2 12a \Rightarrow \cos^2 \frac{\pi}{3} = \left(\frac{1}{2} \right)^2 = \frac{1}{4}$$

$$\cos^2 24a \Rightarrow \cos^2 \frac{2\pi}{3} = \left(-\frac{1}{2} \right)^2 = \frac{1}{4}$$

