آیوا نامداری
دوازدهم ریاضی B
تکلیف ۱۴

۲۰ آذر ۱۱

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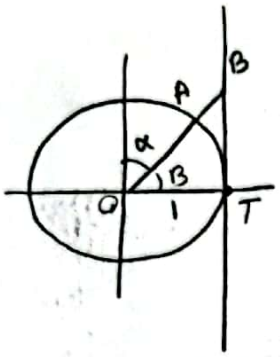

$B+\alpha=90$

$\tan(\frac{\pi}{2}-\alpha)=\cot\alpha=BT$

$\cot\alpha^2+1^2=OB^2$

$\cot\alpha^2+1=OB^2$

$\sqrt{\cot\alpha^2+1}$ ← $\frac{1}{\sin^2}$

$\frac{1}{|\sin\alpha|}=OB$

$OB-1=AB$

$AB=\frac{1}{\sin}-1$

$\frac{1-\sin\alpha}{\sin\alpha}=AB$

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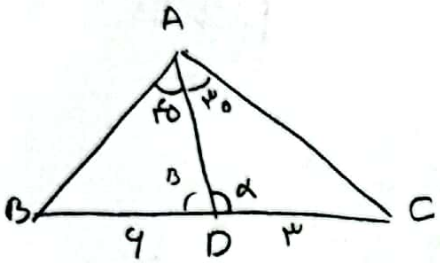

$\frac{AB}{AC}=\frac{4\sin B^2}{\sqrt{2}}=\frac{1\times 2}{4\sqrt{2}}=\frac{2\sqrt{2}}{2}=\sqrt{2}$

$\frac{4\sin B\times 2}{\sqrt{2}}\rightarrow AB$

$\frac{x}{\sin\alpha}=\frac{3}{\frac{1}{2}}$

$3\sin\alpha\times 2\rightarrow AC$

$\sin\alpha=\sin B$

$\frac{x}{\sin B}=\frac{6}{\frac{\sqrt{2}}{2}}$

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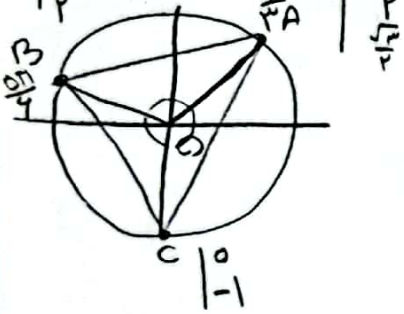

$\frac{1}{2}\sin 120\times OB\times OC=\frac{\sqrt{3}}{4}$

$\frac{1}{2}\sin 90\times OC\times OB=\frac{1}{4}$

$\frac{1}{2}\sin 90\times OA\times OB=\frac{1}{4}$

الف) مساحت

$\frac{1}{4}+\frac{1}{4}+\frac{\sqrt{3}}{4}=\frac{2+\sqrt{3}}{4}$

ب) محیط

$AC=\sqrt{(\frac{1}{2})^2+(\frac{\sqrt{3}+2}{2})^2}$ $\sqrt{2+\sqrt{3}}$

$AB=\sqrt{(\frac{1}{2}+\frac{\sqrt{2}}{2})^2+(\frac{\sqrt{2}}{2}-\frac{1}{2})^2}$ $\frac{1+3+2\sqrt{2}}{4}+\frac{3+1-2\sqrt{3}}{4}=\sqrt{2}$

$BC=\sqrt{(-\frac{\sqrt{2}}{2})^2+(-\frac{\sqrt{2}}{2})^2}=\sqrt{3}$

$\sqrt{3}+\sqrt{2}+\sqrt{2+\sqrt{3}}$

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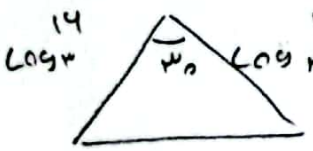
$AC=\log_3^{14}$

$AB=\log_2^{27}$



$\frac{1}{2}\times\log_2^{27}\times\log_3^{14}\times\frac{1}{2}$

$\frac{\log^{27}}{\log^2}=\frac{3\log^3}{\log^2}\times\frac{4\log^2}{\log^3}=\frac{12}{4}$ ۳

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$2\cos^4-\cos^2=\sin^2\alpha(2\sin^2\alpha-1)$

$-\cos 2\alpha$

$\cos^2(2\cos^2-1)+\sin^2(2\sin^2+1)$

$\cos 2m$ $\cos 2\alpha$

$\cos 2\alpha(\cos^2+\sin^2)=1$ $\cos 2x=1$

$\sin 2x=0$

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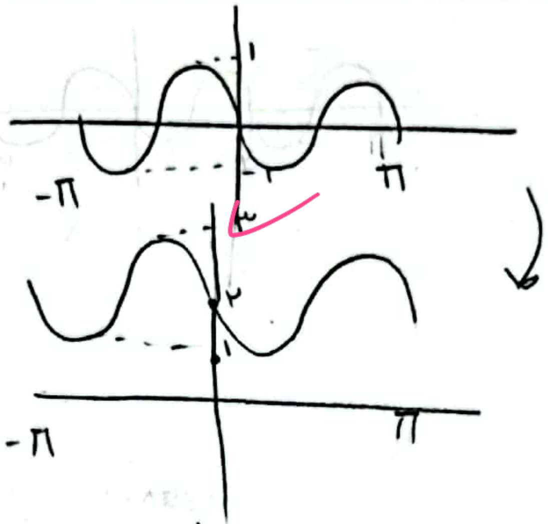
الف) $-2\sin x\cos x+2$

$-\sin 2x+2$

دوره تناوب $\frac{2\pi}{2}=\pi$



ب) $2\cos(\pi x+\frac{\pi}{2})+1$

$-2\sin \pi x+1$

$|-2|+1=3$ max $\quad \frac{2\pi}{\pi}=2$

$-|-2|+1=-1$ min

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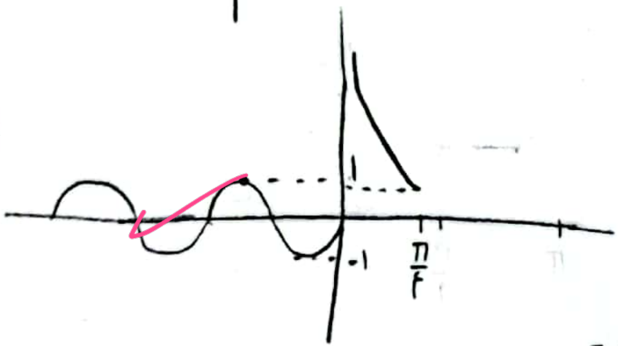
$$f(x)=\begin{cases}\cot x & 0<x<\frac{\pi}{4}\\ \sin x & x\le 0\end{cases}$$



برد $=[-1,+\infty)$

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$a+b\sin(cx)\cos(cx)\cos(2cx) \qquad c>0$

$a+\frac{b}{2}\sin(2cx)\cos(2cx)$

$\frac{b}{4}\sin(4cx)+a$

تناوب $=\frac{5\pi}{10}-\frac{\pi}{10}=\frac{4\pi}{10}=\frac{2\pi}{5}$

$\frac{2\pi}{4c}=\frac{2\pi}{5} \qquad c=\frac{5}{4} \qquad \frac{4\times\frac{5}{4}}{2}=\boxed{5}$

$|\frac{b}{4}|+a=4$

$-|\frac{b}{4}|+a=0$

$2a=4$

$a=2$

$|\frac{b}{4}|=2 \qquad b=\pm 8 \rightarrow +$ قابل قبول

$b\sin(5\times\frac{\pi}{10})+2=4$

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$b>0$

$f(x)=a\cos bx+c$ $\qquad$ تناوب $=\pi \qquad \frac{2\pi}{b}=\pi \qquad b=\pm 2$

$|\tan 2\alpha| \qquad \boxed{\tan 2\alpha=\sqrt{8}}$

$|a|+c=2 \qquad 2c=-2 \qquad \boxed{c=-1}$

$-|a|+c=-4$

$-3\cos 2x-1=0 \qquad \cos 2x=-\frac{1}{3}$

$|a|=3$ منفی $a<0$

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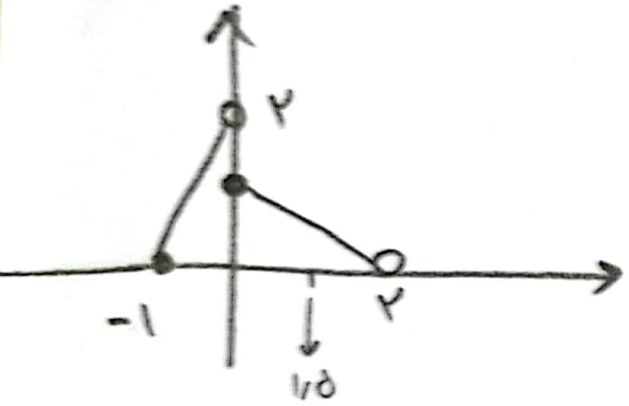

$f(-3.4,5)$

$\begin{vmatrix} -1 & 0 \\ 0 & 2 \end{vmatrix}$ $\begin{vmatrix} 0 & 2 \\ 1 & 0 \end{vmatrix}$

$2x+2$

$f\left(-3.4-\frac{1}{2}\right)$

$\frac{-1}{2}x+1$

(۲)

$-\frac{1}{2}\times\frac{3}{2}+1$

$-\frac{3}{4}+\frac{4}{4}=\frac{1}{4}$