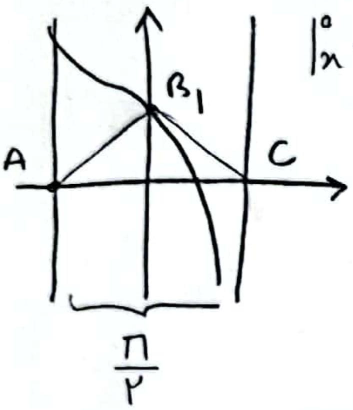
آیدا نامداری
دوازدهم دختران B
تکلیف ۱۵

1

$y=\tan(\frac{\pi}{4}-2x)$ تناوب $=|\frac{\pi}{2}| \to \frac{\pi}{2}$



$|^{0}_{x} \to \tan(\frac{\pi}{4}) \to 1$

مساحت $= \frac{1 \times \frac{\pi}{2}}{2} \to \frac{\pi}{4}$

2

$\frac{4}{9}-\frac{1}{4} \quad \frac{16-9}{36} =$

$\frac{2}{3} \to \frac{4}{9}-\frac{2}{3}\sin\alpha-\frac{1}{4}(1-\sin^2)$

$-\frac{1}{4}+\frac{\sin^2}{4}$

$\frac{\sin^2}{4}-\frac{2}{3}\sin\alpha+\frac{7}{36}$

$\frac{24+18}{18}=x \quad \frac{24-18}{18}=\frac{1}{3}$

$9\sin^2-24\sin+7=0 \quad \sqrt{\Delta}=18$

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

1 ، 3 ، $\sqrt{8}$ (مثلث)

$\cos=\frac{\sqrt{8}}{3}$

$1+\tan^2 \to \frac{1}{\cos^2} = \frac{1}{\frac{8}{9}} = \frac{9}{8}$

3

$\text{Log}^{\frac{\sin}{-\cos}} = \text{Log}^{3} \quad -\tan=3 \quad \tan=-3$

(مثلث) 3 ، 1 ، $\sqrt{10}$

$\sin>0$
$\cos<0$
دامنه Log

$\sin-\cos \quad \frac{3}{\sqrt{10}}+\frac{1}{\sqrt{10}}=\frac{4}{\sqrt{10}} \quad \frac{4\sqrt{10}}{10}$

4

$(1-\cos^2)^2+\cos^2=\frac{4}{5}$

$\cos^4+1-2\cos^2+\cos^2=\frac{4}{5}$

$\cos^4=\cos^2-\frac{1}{5}$

$\cos^4+\sin^2 \quad \cos^2-\frac{1}{5}+1-\cos^2=\frac{4}{5}$

5

$-1<\cos<0$

$\frac{\sin(3+\cos)}{2(1-\cos^2)} = \frac{3+\cos}{2\sin} < 0 \quad \sin<0$

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

ناحیه سوم

$\frac{\sin^2}{\cos}-\frac{1}{\cos} \quad \frac{-(1-\sin^2)}{\cos}$ ($1-\sin^2$ = $\cos^2$) $\quad -\cos>0$

$\cos<0$

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$$\frac{\sin}{\cos}+\frac{\cos}{\sin}=\frac{1}{\sin\cos}$$

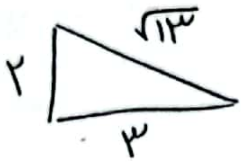
$$\frac{1}{\frac{2}{\sqrt{13}}\times\frac{3}{\sqrt{13}}}=\frac{1}{\frac{6}{13}}$$

$$\frac{2\cos+3\sin}{\sin\cos}=0$$

$$2\cos+3\sin=0$$

$$2\cos=-3\sin$$

$$\tan=-\frac{3}{2}$$



tan چون منفی است ← $-\frac{13}{4}$

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$$\frac{\sqrt{1+\cos f.}}{\sin\delta.+\sin 10}\quad\frac{\sqrt{2\cos^2 22.}}{\cos 50+\cos 80}$$

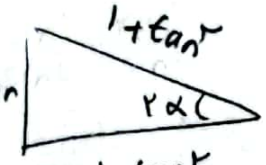
$$\frac{\sqrt{2\cos^2 22.}}{2\cos^2 50-1+\cos 50}$$

$$\cos x+\cos 2x$$

$$\cos 50+\sin 10$$

$$(1-2\sin^2\delta)\ (2\cos^2 1.-1)\ \left(\frac{1-\tan^2 2.}{1+\tan^2 2.}\right)$$

$$\cos 10\qquad\cos 20\qquad\cos 40$$



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$$\sin 1.\cos 1.\to\frac{1}{2}\sin 2.\cos 2.\to\frac{1}{4}\sin 4.\cos 4.\to\frac{\frac{1}{8}\sin 8.}{\sin 10}\to\frac{1}{8}\cot 1.$$

۹

$$\sin=2-3\cos$$

$$\cos^2+\sin^2\to 1$$

$$(2-3\cos)^2+\cos^2=1$$

$$4+9\cos^2-12\cos+\cos^2=1$$

$$10\cos^2-12\cos+3=0$$

$$10\underbrace{\frac{4}{5}^2-12\frac{4}{5}}_{-3}+3=$$

$$\cos 2\alpha-12\cos\alpha$$

$$2\cos^2-1-12\cos$$

$$\underbrace{10\cos^2-12\cos}_{-3}-5$$

$$-8$$

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$$\sin B\sin C=\cos^2\frac{A}{2}$$

$$B=72\quad A?$$

$$A+B+C=180\qquad B=72$$

$$A+C=180-72=108$$

$$C=108-A$$

$$\sin 72\times\sin(108-A)=\cos^2\frac{A}{2}$$

$$\frac{1}{2}[\cos(A-144)-\cos(180-A)]=\cos^2\frac{A}{2}$$

$$-\cos A$$

$$\frac{1}{2}[\cos(A-144)+\cos A]=\cos^2\frac{A}{2}\to\frac{1+\cos A}{2}$$

$$\cos(A-144)+\cos A=1+\cos A$$

$$\cos(A-144)=1$$

$$A-144=0$$

$$A=144$$