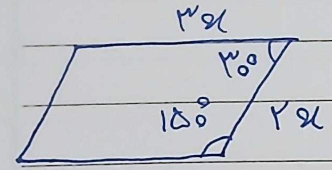
حسنا رضایی / تکلیف ۲۶ / یازدهم دختر C

۱۹٫۷۵

1

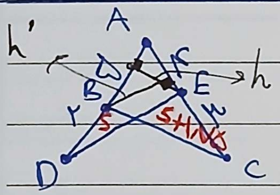


$2p = 10x = 30\sqrt{2}$

$S = ۵۴ \rightarrow ۵۴ = ۲x \times ۳x \times \sin ۳۰ = \sin ۱۵۰$

$۵۴ = ۳x^2 \times \frac{1}{۲} \rightarrow x^2 = ۱۸ \rightarrow x = ۳\sqrt{۲}$

2



$\tan \hat{A} = ?$

$\frac{h}{4} = \sin \hat{A}$, $h = 4\sin \hat{A}$

$\frac{h'}{5} = \sin \hat{A}$, $h' = 5\sin \hat{A}$

$S_{A\hat{E}D} + 1.75 = S_{A\hat{B}C}$

$\frac{4\sin \hat{A} \times 7}{2} + 1.75 = \frac{5\sin \hat{A} \times 7}{2}$

$1.75 = \frac{35\sin \hat{A} - 28\sin \hat{A}}{2}$

$\frac{1}{2} = \sin \hat{A}$ → $\cos \hat{A} > 0$, $\cos \hat{A} = \frac{\sqrt{3}}{2}$ (حاده $\hat{A}$) → $\tan \hat{A} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{\sqrt{3}}{3}$

3

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

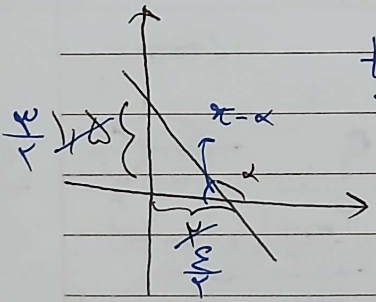
$\frac{1}{\sqrt{\cos^2\alpha}} - \tan\alpha = \frac{1+\sin\alpha}{|\cos\alpha|} \rightarrow \frac{1}{|\cos\alpha|} - \frac{\sin\alpha}{\cos\alpha} = \frac{1+\sin\alpha}{|\cos\alpha|}$

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

α در کدام ناحیه؟

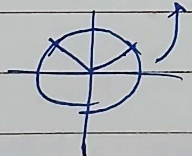
α در ناحیه ۳ قرار دارد.

4



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

$\cot\alpha = -\cot(\pi - \alpha)$



$\cot\alpha = -\frac{4}{3}$

5

$\frac{3\cos(\frac{3\pi}{2} - 22) - 2\sin(\pi - 22)}{\sin(\pi + 22) - \cos(\frac{3\pi}{2} + 22)}$

$\rightarrow \frac{-3\sin(22) - 2\sin(22)}{-\sin(22) - \sin(22)} = \frac{5}{2}$

$-5\sin(22)$

$-2\sin(22)$

6

$$\frac{\sin(\pi-\alpha)}{\sin\left(\frac{\pi}{2}+\alpha\right)-\sin(\alpha-\pi)}$$

$$|\tan^2\alpha-1|$$

$\frac{1}{\cos^2}-1$

$\cos\alpha = \frac{2}{3}$

$\alpha \hookrightarrow$ ربع دوم

$\sin\alpha < 0$

$\cos^2\alpha+\sin^2\alpha = 1$

$\frac{4}{9}+\sin^2\alpha = 1$

$\sin\alpha = -\frac{\sqrt{5}}{3}$

$\hookrightarrow \frac{\cos\alpha+\sin\alpha}{|\frac{1}{\cos^2}-2|}$

$\hookrightarrow \frac{\frac{2}{3}-\frac{\sqrt{5}}{3}}{\frac{1}{\frac{4}{9}}-2|} = \frac{\frac{2-\sqrt{5}}{3}}{\frac{1}{4}} = \frac{4-2\sqrt{5}}{3}$

$\frac{4-2\sqrt{5}}{3}$

I

$\sin\alpha = 2\cos\alpha$

$\alpha \to$ ربع سوم

$\cos\alpha < 0$

$\sin\alpha < 0$

$\cos\alpha = ?$

$\hookrightarrow \sin^2\alpha + \cos^2\alpha = 1 \to 4\cos^2\alpha + \cos^2\alpha = 1 \to \cos^2\alpha = \frac{1}{5} \to \cos\alpha = -\frac{\sqrt{5}}{5}$

$\sin\alpha = -\frac{2\sqrt{5}}{5}$

1,10

$2mx+(m^2-1)y = 3$

$\tan\alpha = \sqrt{3}$

$\left|\frac{-2\sqrt{3}}{3}-\frac{\sqrt{3}}{3}\right| = \frac{3\sqrt{3}}{3}$

$\hookrightarrow -2mx+3 = (m^2-1)y$

$\frac{-2m}{m^2-1}x$

$\hookrightarrow \frac{-2m}{m^2-1} = \sqrt{3}$

$-2m = \sqrt{3}m^2-\sqrt{3}$

$\hookrightarrow \sqrt{3}m^2+2m-\sqrt{3}$

$m = \frac{-2\pm 4}{2\sqrt{3}}$

$\hookrightarrow \frac{2}{2\sqrt{3}} = \frac{\sqrt{3}}{3}$

$\frac{-6}{2\sqrt{3}} = -\sqrt{3}$

$-\frac{2\sqrt{3}}{3}$

9

$\tan\left(\frac{\pi}{4}-x\right) = \frac{1-m}{2+m}$

$-\frac{\pi}{4} < x < \frac{\pi}{4}$

$\hookrightarrow \frac{\tan\frac{\pi}{4}-\tan x}{1+\tan\frac{\pi}{4}\tan x} \to \frac{1-\tan x}{1+\tan x} = \frac{1-m}{2+m}$

$\hookrightarrow \frac{1-\tan x}{2} = \frac{1-m}{3} \to 3-3\tan x = 2-2m$

$-3 < 2m+1 < 3 \to -2 < 2m < 2$

$-4 < 2m < 2$

$-2 < m < 1$

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

$\frac{2m+1}{3} = \tan 2x$

$-1 < \tan x < 1$

10

$\tan(225^\circ)\cos(45^\circ)+\tan(45^\circ)\sin(45^\circ)$

$-\sqrt{3} \quad -\frac{\sqrt{3}}{2}$

$\frac{3}{2}$

$\tan 45^\circ \quad \sin 45^\circ$

$-\sqrt{3}\times\frac{\sqrt{3}}{2}$

$-\frac{3}{2}$

$\hookrightarrow 0$