

Date: .....

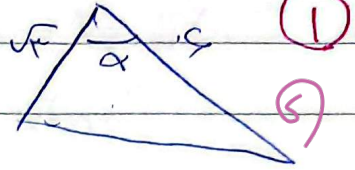
موضوع الذي خلق العوالم

Subject: .....

ماتيس كراوى زاده

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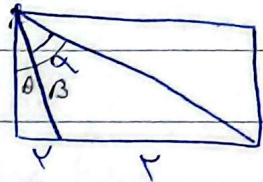
$$\frac{1}{\sqrt{x}} \times \sqrt{3} \sin \alpha = \frac{9}{\sqrt{x}} \Rightarrow \sin \alpha = \frac{3}{\sqrt{3}}$$



$$\sin \alpha = \frac{\sqrt{3}}{\sqrt{3}} \left. \begin{array}{l} \rightarrow \alpha = 110^\circ \\ \rightarrow \alpha = 50^\circ \end{array} \right\} \frac{110}{50} = 2$$

$$\alpha = \beta - \theta \Rightarrow \tan \alpha = \tan(\beta - \theta)$$

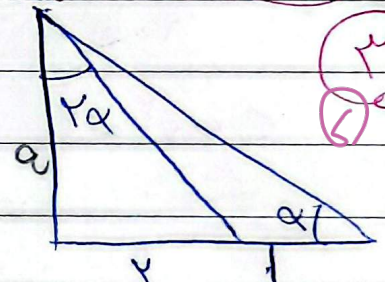
$$\tan(\beta - \theta) = \frac{\tan \beta - \tan \theta}{1 - \tan \beta \tan \theta}$$



$$\frac{\frac{5}{\sqrt{x}} - \frac{\sqrt{x}}{\sqrt{x}}}{1 + \frac{5}{\sqrt{x}} \times \frac{\sqrt{x}}{\sqrt{x}}} = \frac{1}{\sqrt{x}} \Rightarrow \cot \alpha = \sqrt{x}$$

$$\tan \alpha = \frac{a}{p} \quad \tan \alpha = \frac{p}{a} = \frac{p \tan \alpha}{1 - \tan^2 \alpha}$$

$$\frac{p}{a} = \frac{p \tan \alpha}{1 - \tan^2 \alpha} \Rightarrow \frac{p \tan \alpha}{a} = p - \frac{p \tan^2 \alpha}{a}$$



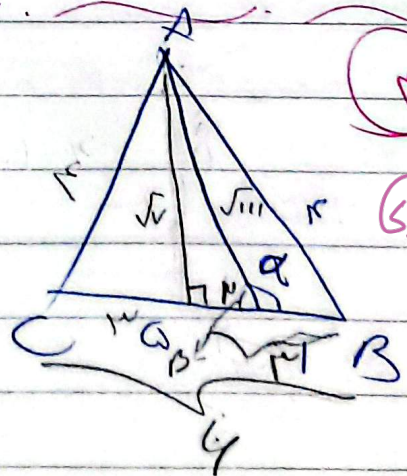
$$\frac{p \tan \alpha}{a} = p \Rightarrow \boxed{a = \frac{p}{\sqrt{x}}}$$

$$\tan \alpha = \frac{1}{\sqrt{x}} \Rightarrow \boxed{\cot \alpha = \sqrt{x}}$$

$$\tan \beta = \sqrt{\frac{p}{a}}$$

$$\tan \alpha = -\tan \beta$$

$$\tan \alpha = -\sqrt{\frac{p}{a}}$$



$$\sin^2 x + 1 = \frac{r}{r}$$

$$r \sin^2 x + \cos^2 x = \frac{r}{r} \quad (8)$$

$$\sin^2 x = \frac{1}{r}$$

$$\cos^2 x = \frac{r-1}{r} \Rightarrow \tan^2 x = \frac{1}{r-1} \quad (9)$$

$$\frac{\sin^2 \alpha + \frac{1-\sin^2 \alpha}{r}}{1 + \frac{\cos^2 \alpha}{r-1-\sin^2 \alpha}} = \frac{\cos^2 \alpha + \frac{1-\cos^2 \alpha}{r}}{1 + \frac{\sin^2 \alpha}{r-1-\cos^2 \alpha}}$$

$$\frac{r \sin^2 \alpha - \sin^2 \alpha + r}{r - \sin^2 \alpha} = \frac{r \cos^2 \alpha - \cos^2 \alpha + r}{r - \cos^2 \alpha} \quad (10)$$

$$\frac{(r \sin^2 \alpha - \sin^2 \alpha + r)}{r - \sin^2 \alpha} = \frac{(r \cos^2 \alpha - \cos^2 \alpha + r)}{r - \cos^2 \alpha} = -\sin^2 \alpha + r - r + \cos^2 \alpha =$$

$$\cos^2 \alpha - \sin^2 \alpha = \cos^2 \alpha$$

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$$\sin\left(\alpha + \frac{\pi}{4}\right) \cos\left(-\alpha + \frac{\pi}{4}\right) = \frac{\tan\left(\alpha - \frac{\pi}{4}\right)}{\cos\left(\alpha - \frac{\pi}{4}\right)} \quad (11)$$

$$= \cos \alpha \sin \alpha + \cot \alpha$$

$$= \cos \alpha \sin \alpha + \frac{\cos \alpha}{\sin \alpha} \Rightarrow \frac{-\cos \alpha (\sin^2 \alpha) + \cos \alpha}{\sin \alpha}$$

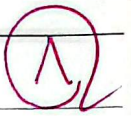
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$$\frac{\cos \alpha (1 - \sin^2 \alpha)}{\sin \alpha} = \frac{\cos^3 \alpha}{\sin \alpha} = \cot^2 \alpha \cos \alpha \quad (12)$$

$$\frac{r}{r} \times \frac{r}{r} = \left(\frac{r}{100}\right)$$

~~$\frac{\pi}{12}$~~  -  $\frac{\pi}{12}$

$$r \cos \alpha + r \sin(\alpha - \frac{\pi}{4})$$



$$r \cos \frac{\pi}{4} + r \sin(-\frac{\pi}{4})$$

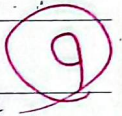


$$\frac{r}{r} - r \times \frac{1}{r} = \frac{1}{r}$$

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$$\tan(\frac{\alpha}{r}) = \frac{1}{r}$$

$$\frac{\tan \alpha - \sin \alpha}{\sin \alpha - \cos \alpha} = ?$$



$$\frac{\frac{1}{12} - \frac{1}{14}}{\frac{1}{14} - \frac{1}{12}}$$

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$$\tan \alpha = \frac{\frac{1}{r}}{\frac{10}{14}} = \frac{1}{10}$$

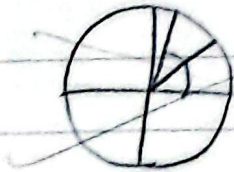
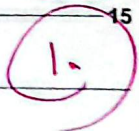
$$\frac{\frac{1}{14} - \frac{10}{14}}{\frac{1}{14} - \frac{10}{14}}$$



$$\frac{r \times 1}{10 \times 10} \times \frac{14}{r} = \frac{-14}{100}$$



$$\cos \alpha > 0 \Rightarrow \frac{\cos \alpha}{\sin \alpha}$$



$\sin \alpha > \sin \alpha$   
جان

$\frac{\sin \alpha}{\sin \alpha} = \frac{r \cos \alpha}{r \cos \alpha}$   
 $\frac{\sin \alpha}{\sin \alpha} = \frac{r \cos \alpha}{r \cos \alpha}$

ناحیه چهارم  $\sin \alpha < \cos \alpha$   $\frac{1}{1} > \cos \alpha$

Min