

$$\frac{a}{b} = \frac{r}{r} \rightarrow a = r b$$

$$S = ab \sin \theta$$

$$\sin 100^\circ = \sin(180 - 80) = \sin 80 = \frac{1}{r}$$

$$r = \frac{r b}{r} \times b \times \frac{1}{r} = \frac{r}{r} b^2 = \frac{1}{r} b^2 \rightarrow b^2 = 144 \rightarrow b = \sqrt{144}$$

$$b = 12, a = 12$$

$$P = r a + r b = 12 + 12 = 24$$

$$S_{\Delta} = \frac{1}{2} ab \sin \theta$$

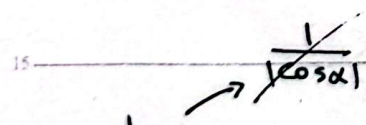
$$S_{ADE} = \frac{1}{2} \times r \times r \times \sin \hat{A} = \frac{1}{2} r^2 \sin \hat{A}$$

$$S_{ABC} = \frac{1}{2} \times a \times b \times \sin \hat{A} = \frac{1}{2} ab \sin \hat{A}$$

$$S_{ABC} - S_{ADE} = \frac{1}{2} ab \sin \hat{A} - \frac{1}{2} r^2 \sin \hat{A} = \frac{1}{2} \sin \hat{A} (ab - r^2)$$

$$\sin \hat{A} = \frac{1}{r} \rightarrow \hat{A} = 90^\circ \rightarrow \cos \hat{A} = \frac{r}{r}$$

$$\tan \hat{A} = \frac{\sin \hat{A}}{\cos \hat{A}} = \frac{\frac{1}{r}}{\frac{r}{r}} = \frac{1}{r} = \frac{1}{r}$$



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

$$|\cos \alpha| = -\cos \alpha \rightarrow \cos \alpha < 0$$

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

$$\rightarrow \sin \alpha < 0$$

$$\sin \alpha < 0$$



پہلا حصہ

$$\tan\left(\frac{\pi}{4} - \alpha\right) = -\cot\alpha = -\frac{r}{p}$$

سے  $180^\circ$  و  $90^\circ$   $\alpha$  سے  
 سے  $180^\circ$  و  $90^\circ$   $\frac{\pi}{4} - \alpha$  سے

$$\text{شیب} = \tan\alpha = \frac{100}{p} = 0.75 \rightarrow \cot\alpha = \frac{1}{\tan\alpha} = \frac{100}{75} = \frac{r}{p}$$

$$\frac{r \cos(\pi - \alpha) - p \sin(\pi - \alpha)}{\sin(\pi - \alpha) - \cos(\pi - \alpha)} = \frac{-r \sin \alpha - p \sin \alpha}{-\sin \alpha - \sin \alpha} = \frac{-r \sin \alpha - p \sin \alpha}{-2 \sin \alpha}$$

$$\frac{a}{p} = r \cos \alpha$$

$$\frac{\sin\left(\frac{\pi}{4} + \alpha\right) - \sin(\alpha - \frac{\pi}{4})}{|\tan^2 \alpha - 1|} = \frac{\cos \alpha - (-\sin(\pi - \alpha))}{|\tan^2 \alpha - 1|}$$

$$\frac{\cos \alpha + \sin \alpha}{|\tan^2 \alpha - 1|} = \frac{\frac{r}{p} + \left(\frac{-\sqrt{a}}{p}\right)}{\left|\frac{a}{p} - 1\right|} = \frac{\frac{r - \sqrt{a}}{p}}{\frac{1}{p}} = \frac{r - \sqrt{a}}{1}$$

$$\cos \alpha = \frac{r}{p} \rightarrow \cos^2 \alpha + \sin^2 \alpha = 1 \rightarrow \frac{r^2}{p^2} + \sin^2 \alpha = 1 \rightarrow \sin^2 \alpha = \frac{a}{p^2} \rightarrow$$

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

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

$$\rightarrow a \cos^2 \alpha = 1 \rightarrow \cos^2 \alpha = \frac{1}{a} \rightarrow \cos \alpha = \frac{1}{\sqrt{a}} = \frac{-\sqrt{a}}{a}$$



پہلا اجنبی

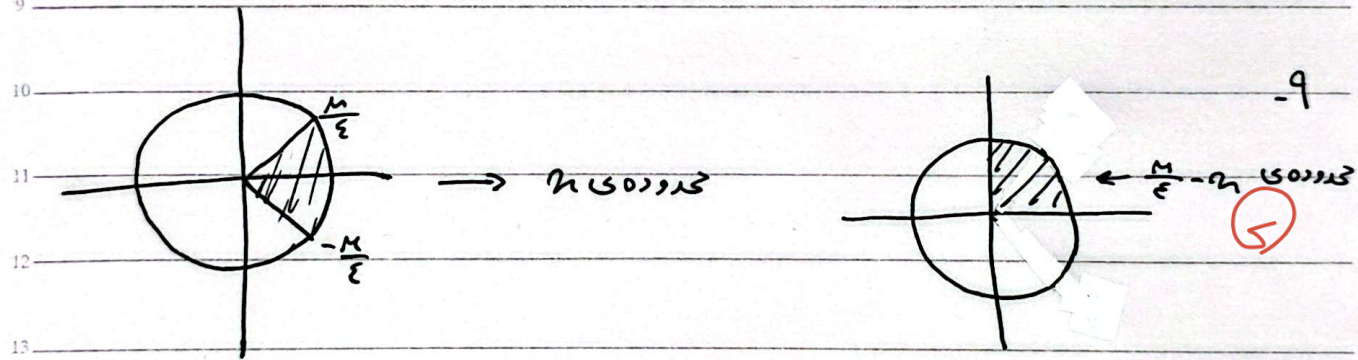
1  $\tan \theta = \tan 45^\circ = \sqrt{3}$

2  $2m^2 + (m^2 - 1)y = 3 \rightarrow \tan \theta = \frac{-2m}{m^2 - 1}$

3  $\sqrt{3} = \frac{-2m}{m^2 - 1} \rightarrow \sqrt{3}m^2 - \sqrt{3} = -2m \rightarrow \sqrt{3}m^2 + 2m - \sqrt{3} = 0$  (5)

5  $a \times \text{دو ضرب} \rightarrow m^2 + 2m - 3 = 0$  جمع ضرب برابر سے است  $m_1 = \frac{c}{a} = -3$   
 $m_2 = 1$   
 $m_1 = \frac{-2}{\sqrt{3}}, m_2 = \frac{1}{\sqrt{3}}$   $\div \sqrt{3}$

8 اختلاف  $|\frac{1}{\sqrt{3}} - (-\frac{2}{\sqrt{3}})| = \frac{3}{\sqrt{3}} = \frac{3\sqrt{3}}{3}$



14  $\frac{M}{E} - (-\frac{M}{E}) = \frac{2M}{E} = \frac{M}{F}, \frac{M}{F} - \frac{M}{E} = 0$

15  $\tan(\frac{M}{E} - \alpha) > 0 \rightarrow \frac{1-m}{1+m} > 0$   $\frac{-2}{-1+1} \rightarrow -2 < m < 1$   $m = (-2, 1)$

18  $\tan(\theta_0) \times \cos(\theta_1) + \tan(\theta_2) \times \sin(\theta_3)$   $\rightarrow \tan(\theta_0 + \theta_1) + \tan(\theta_2 + \theta_3)$   $\rightarrow \tan(\theta_0 + \theta_1 + \theta_2 + \theta_3)$   $\rightarrow \tan(\theta_0 + \theta_1)$  (5)

20  $(-\cot \theta_0) \times (-\cos \theta_0) + (-\tan \theta_0) \times (\sin \theta_0) = \frac{\cos \theta_0}{\sin \theta_0} - \frac{\sin \theta_0}{\cos \theta_0}$

21  $\frac{\sin \theta_0}{\cos \theta_0} = \frac{\cos \theta_0}{\sin \theta_0} \rightarrow \frac{\cos^2 \theta_0}{\sin \theta_0} - \frac{\cos^2 \theta_0}{\sin \theta_0} = 0$   
*Benobar*