

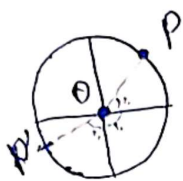
۱۲۶ و ۱۲۷. ماکزیمم و مینیمم
۱۲. با استفاده از روش کالیبراسیون - ۱۲۳ - کلاس

$$\frac{a \sin \frac{\pi}{6} + b \cos \frac{\pi}{6}}{a \sin \frac{11\pi}{6} + b \cos \frac{11\pi}{6}} = \tan \frac{\pi}{6}$$

$$\frac{-\frac{\sqrt{3}}{2}a - \frac{\sqrt{3}}{2}b}{-\frac{1}{2}a + \frac{1}{2}b} = -\frac{\sqrt{3}}{3} = -\frac{1}{\sqrt{3}}$$

$$+\frac{\sqrt{3}}{2}a + \frac{\sqrt{3}}{2}b = \frac{1}{2}b - \frac{1}{2}a \Rightarrow b = -2a \Rightarrow \frac{b}{a} = -2$$

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$$P(\frac{1}{2}, \frac{\sqrt{3}}{2}) = (\frac{1}{2}, \frac{\sqrt{3}}{2})$$

$$P'(\frac{\sqrt{3}}{2}, \frac{1}{2})$$

$$PP' = \sqrt{(\frac{1}{2} - \frac{\sqrt{3}}{2})^2 + (\frac{\sqrt{3}}{2} - \frac{1}{2})^2} = \sqrt{2 + \sqrt{3}}$$

$$\text{مساحت} = \frac{1}{2} \times 1 \times 1 + \sqrt{2 + \sqrt{3}}$$

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۱۲۰ و ۱۲۱. ماکزیمم و مینیمم
۱۲. با استفاده از روش کالیبراسیون - ۱۲۳ - کلاس

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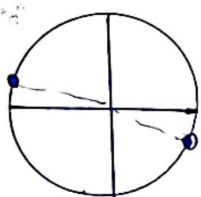
$$|\frac{11}{\sqrt{2}}m - 90| = 20 \Rightarrow |\frac{11}{\sqrt{2}}m - 90| = 20$$

$$\frac{11}{\sqrt{2}}m - 90 = 20 \Rightarrow m = 20$$

$$\frac{11}{\sqrt{2}}m - 90 = -20$$

$$\frac{11}{\sqrt{2}}m = \frac{140}{\sqrt{2}} = 140\sqrt{2}$$

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$$-\frac{1}{\sqrt{2}} \leq \frac{m-90}{\sqrt{2}} \leq 1 \Rightarrow \frac{1}{\sqrt{2}} \leq m \leq \frac{3}{\sqrt{2}}$$

نکته: عدد صحیح است

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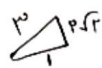
$$\frac{\sin(102^\circ) + k \cos(122^\circ)}{\cos(112^\circ) + \gamma \sin(112^\circ)} = \gamma$$

$$\tan 12^\circ = \gamma \rho$$

$$\frac{\cos 12^\circ + k \cos(\gamma \rho - 12^\circ)}{-\cos 12^\circ - \gamma \sin 12^\circ} = \frac{\cos 12^\circ - k \sin 12^\circ}{-\cos 12^\circ - \gamma \sin 12^\circ} = \frac{100 - \gamma \Delta k}{-100 - \Delta 0} = \gamma$$

$$k = \gamma \gamma$$

$$\frac{1 - \cos x}{1 + \cos x} = \gamma \Rightarrow -\frac{1}{\gamma} = \cos x$$



$$\tan x = \gamma \sqrt{\gamma}$$

$$\cot x = \frac{1}{\gamma \sqrt{\gamma}}$$

$$\frac{\tan(\frac{\gamma}{\gamma} - x) - \cot(\gamma - x)}{\cot(\frac{\gamma}{\gamma} - x) + \gamma \tan(\gamma - x)}$$

$$= \frac{\cot x + \cot x}{\tan x - \gamma \tan x} = \frac{\gamma \cot x}{-\tan x} = -\frac{1}{\gamma \sqrt{\gamma}}$$

$$= -\frac{1}{\gamma}$$

$$10 \Delta \times \frac{\gamma}{110} = \frac{\gamma \Delta}{\Delta}$$

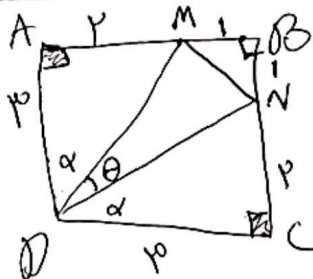
$$\begin{aligned} L_A &= L_B \\ \gamma_A R_A &= \gamma_B R_B \\ \frac{10}{\Delta} R_A &= \frac{\gamma \Delta}{10} R_B \\ R_A &= \frac{\gamma}{10} R_B \end{aligned}$$

$$\frac{S_A}{S_B} = \left(\frac{R_A}{R_B}\right)^2 = \frac{\gamma}{\Delta}$$



$$S_{ABC} = \sqrt{\gamma} \quad \sin PC = \gamma$$

$$\begin{aligned} S_{ABC} &= \frac{1}{2} (AB)(BC) = \sqrt{\gamma} \\ \frac{1}{2} (\sqrt{\gamma}) BC &= \sqrt{\gamma} \\ BC &= 2 \\ \sin PC &= \gamma \sin C \sin C \\ \Rightarrow \gamma \left(\frac{\sqrt{\gamma}}{\sqrt{\gamma}}\right) \left(\frac{\gamma}{\sqrt{\gamma}}\right) &= \frac{\gamma \sqrt{\gamma}}{\sqrt{\gamma}} \end{aligned}$$



$$\sin \theta = \sin(110 - \gamma \alpha) = \sin \gamma \alpha = \gamma \sin \alpha \cos \alpha$$

$$\sin \alpha = \frac{\gamma}{\sqrt{\gamma}}$$

$$\cos \alpha = \frac{\gamma}{\sqrt{\gamma}}$$

$$\Rightarrow \gamma \left(\frac{\gamma}{\sqrt{\gamma}}\right) \left(\frac{\gamma}{\sqrt{\gamma}}\right) = \frac{\gamma \gamma}{\sqrt{\gamma}}$$