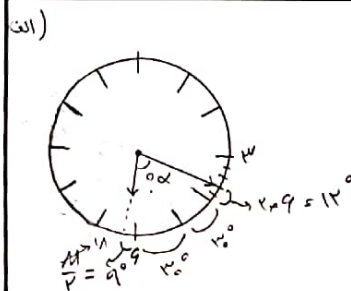


$\alpha = |5.5M - 3.0H| = |29.7 - 9.0| = 20.7^\circ$

$\xrightarrow{\text{کمرکز } 180^\circ} 34.0^\circ - 20.7^\circ = 13.3^\circ$



$\alpha = |5.5M - 3.0H| = |9.9 - 11.0| = 1.1^\circ$

(الف) $\sum \frac{\alpha}{r} R^2 = \frac{\pi}{r} \times 3^2 = \frac{9\pi}{12} = \frac{3\pi}{4} \text{ cm}^2$

(ب) $\text{خطا} = \alpha R + 2R = (\frac{\pi}{4} \times 3) + 2(3) = \frac{\pi}{4} + 6 \text{ cm}$

(الف) $\sum \text{مساحت} = \frac{1}{2} ab \sin \alpha = \frac{1}{2} (1)(0) (\sin 90^\circ) = 10\sqrt{3} \text{ (cm)}^2$

(ب) $\Rightarrow a = \sqrt{b^2 + c^2 - 2bc \cos A} = \sqrt{4^2 + 25 - 2(4)(5) \cos 60^\circ} = \sqrt{19 - (10)(\frac{1}{2})} = 7$

مساحت a و b و c

$\Rightarrow \text{خطا} = a + b + c = 7 + 4 + 9 = 20$

$\hat{A} + \hat{B} + \hat{C} = 180^\circ \Rightarrow \hat{A} = 30^\circ \rightarrow \text{مربع} : \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} \rightarrow \frac{15}{\sin(30^\circ)} = \frac{15\sqrt{2}}{\sin(B)}$

$\Rightarrow \hat{B} + \hat{C} = 150^\circ \Rightarrow \hat{C} = 150^\circ$

$\frac{D}{180} = \frac{\text{Rad}}{\pi}$

$\hat{B} \Rightarrow \frac{150^\circ}{\pi} = \frac{\pi}{\pi} \Rightarrow \hat{B} = \frac{\pi}{2}$

$\hat{C} \Rightarrow \frac{150^\circ}{\pi} = \frac{\pi}{\pi} \Rightarrow \hat{C} = \frac{7\pi}{12}$

$\sin B = \frac{15\sqrt{2} \times \frac{1}{2}}{15} = \frac{\sqrt{2}}{2}$

بسیار بزرگ است

$$\rightarrow = \frac{-\tan(\alpha) + \gamma \tan(\alpha)}{-\tan(\alpha) - \tan(\alpha)} = \frac{\gamma \tan(\alpha)}{-\gamma \tan(\alpha)} = -1$$

6

$$\frac{\pi}{12} \text{ s } \frac{D}{120} \rightarrow D = 10^\circ \Rightarrow \tan 10^\circ = a \quad \left\{ \begin{array}{l} \gamma \tan(\frac{\pi}{4} - 10^\circ) + \tan(\frac{\pi}{4} + 10^\circ) = \frac{\gamma \cot(10^\circ) - \cot(10^\circ)}{\gamma \tan(10^\circ) - \cot(10^\circ)} \end{array} \right.$$

$$\text{Condition's } \frac{1}{\tan 10^\circ} \text{ s } a \quad A: \frac{\gamma}{a} - \frac{1}{a} = \frac{\frac{1}{a}}{\frac{-\gamma a - 1}{a}} = \frac{-1}{\gamma a + 1}$$

7

$$\frac{\sin \alpha + \cos \alpha}{\sin \alpha - \cos \alpha} + \frac{\sin \alpha - \cos \alpha}{\sin \alpha + \cos \alpha} \xrightarrow{\text{جواب}} \frac{\sin^2 \alpha + \cos^2 \alpha + \gamma \sin \alpha \cos \alpha}{(\sin \alpha + \cos \alpha) + (\sin \alpha - \cos \alpha)} \text{ s } \frac{\gamma (\sin^2 \alpha + \cos^2 \alpha)}{-\cos 2\alpha} = \gamma$$

$$\rightarrow \cos 2\alpha = \frac{-\gamma}{\gamma} \rightarrow \tan \gamma \alpha \text{ s } \frac{\sin \gamma \alpha}{\cos \gamma \alpha} \text{ s } \frac{1 - \cos 2\gamma \alpha}{1 + \cos 2\gamma \alpha} = \frac{1 + \frac{\gamma}{\gamma}}{1 - \frac{\gamma}{\gamma}} \text{ s } \frac{\frac{\gamma}{\gamma}}{\frac{1}{\gamma}} = \underline{D}$$

8

$$\begin{aligned} \sin^2 \alpha + 1 - \cos^2 \alpha &= \gamma \sin^2 \alpha - \cos^2 \alpha \\ \sin^2 \alpha + \cos^2 \alpha - (1 - \cos^2 \alpha) &= \cos^2 \alpha \\ \sin^2 \alpha &= \cos^2 \alpha \\ \tan^2 \alpha &= \frac{\sin^2 \alpha}{\cos^2 \alpha} = \frac{1}{\gamma} = \gamma \Rightarrow \tan \alpha = \frac{1}{\gamma} \end{aligned}$$

9

$$\text{الف) } \cos(45^\circ) \sim \cos^2 \alpha = \frac{1 + \cos 2\alpha}{2} \rightarrow \cos^2(45^\circ) = \frac{1 + \cos(90^\circ)}{2} = \frac{1 + 0}{2} = \frac{1}{2}$$

$$\rightarrow \cos(45^\circ) \text{ s } \sqrt{\frac{1 + \cos 90^\circ}{2}} = \frac{\sqrt{1 + 0}}{2} = \frac{1}{2}$$

$$\begin{aligned} \text{ب) } \sin(45^\circ) \text{ s } \frac{1 - \cos(90^\circ)}{2} &= \frac{1 - 0}{2} = \frac{1}{2} \\ \sin(45^\circ) &= \frac{1}{2} \end{aligned}$$

10