

$2V^\circ: (\pi) \text{ rad}$ (الف) $\frac{1\Lambda^\circ}{2V^\circ} \mid \pi \text{ rad}$ $\pi = \frac{2V^\circ \pi}{1\Lambda^\circ} = 0.1\omega \text{ rad}$ $\boxed{\pi = 0.1\omega}$	$12\omega^\circ: (\pi) \text{ rad}$ (ب) $\frac{12\omega^\circ}{1\Lambda^\circ} \mid \pi \text{ rad}$ $\pi = \frac{12\omega^\circ \pi}{1\Lambda^\circ} = \frac{2\omega \pi}{\pi 4} \text{ rad}$ $\boxed{\pi = \frac{2\omega \pi}{\pi 4}}$	$\frac{\omega \pi}{12} \text{ rad}: (\pi)^\circ$ (ج) $\frac{1\Lambda^\circ}{\pi^\circ} \mid \frac{\omega \pi}{12}$ $\pi = \frac{\omega}{12} \times 1\Lambda^\circ = V\omega^\circ$ $\boxed{\pi = V\omega}$	$\frac{4\pi}{9} \text{ rad}: (\pi)^\circ$ $\frac{\pi}{4\pi/9} \mid 1\Lambda^\circ$ $\pi = \frac{4}{9} \times 1\Lambda^\circ = 2\Lambda^\circ$ $\boxed{\pi = 2\Lambda^\circ}$	1
$4^\circ: G$ $\frac{12\omega a}{9} \mid 1\Lambda^\circ$ $\boxed{12\omega a}$ $1\Lambda^\circ \mid \pi \text{ rad}$ $\boxed{12\omega a} \mid \frac{a\pi}{\Lambda}$	$12\omega a + 12\omega a + 10a = 1\Lambda^\circ$ $4\omega a = 1\Lambda^\circ$ $\boxed{a = 4^\circ}$			2
$\frac{1}{\sqrt{2}} \times \frac{\sqrt{2}}{2} - \frac{\sqrt{2}}{2} \times \frac{1}{\sqrt{2}} - 1 + 2 \times 1 = 1$ $\frac{1}{\sqrt{2}} + 1 + \sqrt{2} = \frac{1\sqrt{2}}{\sqrt{2} - \frac{\sqrt{2}}{\sqrt{2}}} = \frac{1\sqrt{2}}{2\sqrt{2}} = \frac{1\sqrt{2}}{2}$				3
$\sin^2 \theta = -\frac{1}{\sqrt{2}} \times \frac{1}{\sqrt{2}} + \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} = \frac{3}{4} - \frac{1}{4} = \frac{1}{2}$ $1 - \sin^2 \theta = \cos^2 \theta \quad 1 - \frac{1}{2} = \cos^2 \theta$ $\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1$	$\sin \theta = \pm \frac{1}{\sqrt{2}} \times \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{2}$ $\cos \theta = \pm \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{2}$			4
$\tan \theta = \frac{2 \times \frac{\sqrt{2}}{2} (1 - \frac{1}{2})}{(1 - \frac{1}{2})^2} = \frac{2 \times \frac{\sqrt{2}}{2}}{\frac{1}{2}} = 2\sqrt{2}$ $\therefore \tan \theta = 2\sqrt{2} \quad \theta = 40^\circ$				5
$1\Lambda^\circ \mid \pi \text{ rad}$ $\frac{40}{90} \mid \pi \text{ rad}$ $\pi = \frac{40\pi}{90} = \frac{\pi}{9} \text{ rad}$ $\pi = \frac{\pi}{9}$				

$$\tan \theta + 1 = \frac{1}{\cos \theta}$$

$$\sec \theta + 1 = \frac{1}{\cos \theta}$$

$$\cos \theta = \frac{1}{\sec \theta}$$

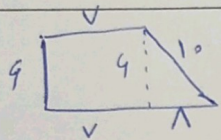
$$\cos \theta = \pm \frac{1}{\sqrt{4}}$$

$$\sin \theta = 1 - \cos \theta$$

$$\frac{3 \times \frac{1}{\sqrt{4}} - \frac{1}{\sqrt{4}}}{\frac{1}{\sqrt{4}} - 3 \times \frac{1}{\sqrt{4}}} = \frac{1 \times 1}{1} = 1$$

$$\frac{3 \times \left(-\frac{1}{\sqrt{4}}\right) + \frac{1}{\sqrt{4}}}{-\frac{1}{\sqrt{4}} + 3 \times \frac{1}{\sqrt{4}}} = \frac{-\frac{2}{\sqrt{4}}}{\frac{2}{\sqrt{4}}} = -1$$

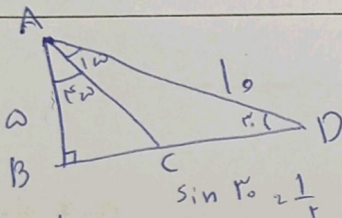
$$\sin \theta = 1 - \frac{1}{\sqrt{4}} = \frac{2}{\sqrt{4}} \quad \sin \theta = \pm \frac{1}{\sqrt{4}}$$



$$\frac{9}{10} = \sin \theta = \frac{4}{10}$$

$$\boxed{9 = 10}$$

$$P = 10 + 9 + 10 + 9 = 38$$



$$CD = BD - BC = 10 - 5 = 5$$

$$\frac{1}{2} \times 10 \times AB$$

$$\boxed{AB = 5} \quad \boxed{BC = 5} \rightarrow ABC \text{ متساوی الساقین}$$

$$\frac{\sqrt{3}}{2} \times 10 = BD \quad \boxed{BD = 5\sqrt{3}}$$

$$\left. \begin{array}{l} \text{ربع دوم} \left\{ \begin{array}{l} \Rightarrow \sin \theta = \text{کوسین} \theta \\ \Rightarrow \text{انزایش} \theta \end{array} \right. \\ \text{ربع سوم} \left\{ \begin{array}{l} \Rightarrow \sin \theta = \text{کوسین} \theta \\ \Rightarrow \text{انزایش} \theta \end{array} \right. \end{array} \right\} \text{الف) } \theta \text{ در ربع سوم}$$

$$\left. \begin{array}{l} \text{ربع اول} \left\{ \begin{array}{l} \Rightarrow \sin \theta = \text{کوسین} \theta \\ \Rightarrow \text{انزایش} \theta \end{array} \right. \\ \text{ربع دوم} \left\{ \begin{array}{l} \Rightarrow \sin \theta = \text{کوسین} \theta \\ \Rightarrow \text{انزایش} \theta \end{array} \right. \end{array} \right\} \text{ب) } \theta \text{ در ربع دوم}$$

$$1 + \tan^2 x = \frac{1}{\cos^2 x}$$

$$\sin x = \pm \frac{1}{\sqrt{10}} = -\frac{1}{\sqrt{10}} \times \frac{\sqrt{10}}{\sqrt{10}} = -\frac{\sqrt{10}}{10}$$

$$1 + \frac{1}{9} = \frac{1}{\cos^2 x}$$

$$\frac{1}{\cos^2 x} = \frac{10}{9}$$

$$\cos^2 x = \frac{9}{10} \Rightarrow \cos^2 x + \sin^2 x = 1$$

$$\sin^2 x = 1 - \cos^2 x \quad \sin^2 x = 1 - \frac{9}{10} = \frac{1}{10}$$