

الف) $\frac{27}{110} = \frac{R_{ad}}{\pi} \rightarrow \frac{27}{110} \times \frac{\pi}{1} = \frac{27\pi}{110}$ ب) $\frac{128}{110} \times \frac{\pi}{1} = \frac{128\pi}{110}$

ج) $\frac{d\pi}{\frac{1}{\pi}} \times \frac{110}{\pi} = 10^\circ$ د) $\frac{\sum \pi}{\pi} \times \frac{110}{\pi} = 10^\circ$

$\frac{a\pi}{\pi} \times \frac{110}{\pi} - \frac{\varepsilon \delta a^\circ}{2} = 10a^\circ \quad \frac{12\delta a}{\pi} \times \frac{110}{\pi} = 12\delta a^\circ$

$12\delta a + 12\delta a + 10a = 110 \rightarrow \varepsilon \delta a = 110 \rightarrow a = \varepsilon^\circ$

الف) $\frac{1}{\pi} \times \frac{\sqrt{3}}{2} - \frac{\sqrt{3}}{2} \times \frac{1}{\pi} - 1 + 2 = 1$

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

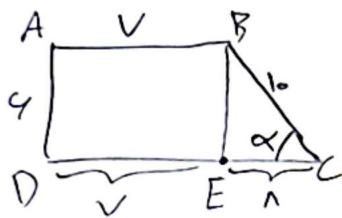
$\frac{1}{\pi} \times \frac{1}{\pi} + \frac{\sqrt{3}}{2} \times \frac{\sqrt{3}}{2} = \sin^2 \theta$

$\frac{1}{\varepsilon} + \frac{3}{\varepsilon} = \sin^2 \theta \rightarrow \sin^2 \theta = \frac{4}{\varepsilon} \rightarrow \sin \theta = \frac{\sqrt{4}}{\sqrt{\varepsilon}} \rightarrow \theta = \varepsilon^\circ \rightarrow \tan \varepsilon = 1$

$\frac{\frac{2\sqrt{3}}{3} \left(1 - \frac{1}{3}\right)}{\left(1 - \frac{1}{3}\right) \left(1 - \frac{1}{3}\right)} = \frac{\frac{2\sqrt{3}}{3}}{\frac{1}{3}} = \sqrt{3} \rightarrow \tan \theta = \sqrt{3} \rightarrow \theta = 60^\circ = \left(\frac{\pi}{3}\right)$

$$\frac{\sin \theta}{\cos \theta} = \Delta \rightarrow \sin \theta = \Delta \cos \theta$$

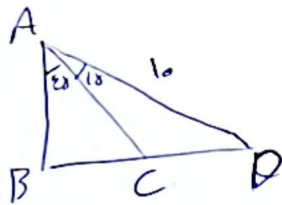
$$\frac{3 \sin \theta - \cos \theta}{\sin \theta - 2 \cos \theta} = \frac{1 \Delta \cos \theta - \cos \theta}{\Delta \cos \theta - 2 \cos \theta} = \frac{1 \Delta}{\Delta - 2} \quad \checkmark$$



$$\sin \alpha = \frac{BE}{BC} = \frac{4}{10} \Rightarrow \frac{4}{BC} = \frac{4}{10} \rightarrow BC = 10$$

$$\cos \alpha = \frac{EC}{BC} = \frac{1}{10} \rightarrow \frac{EC}{10} = \frac{1}{10} \rightarrow EC = 1$$

$$V + 4 + 1 + 10 = 16 \quad \checkmark$$



$$AB = BC = 10 \times \cos 40^\circ = \Delta$$

$$BD = \sin 40^\circ \times 10 = \frac{10\sqrt{3}}{2} = 5\sqrt{3}$$

$$CD = BD - CB = 5\sqrt{3} - 5 = 5(\sqrt{3} - 1) \quad \checkmark$$

بج ۳

اذا با افزایش مقدار $\uparrow \cos \theta$ و $\downarrow \sin \theta$
بج ۳ و ۲

بج ۲

ب با افزایش مقدار $\downarrow \cos \theta$ و $\uparrow \sin \theta$
بج ۲ و ۳

$$9 \sin^2 \alpha = \cos^2 \alpha \leftarrow 3 \sin \alpha = \cos \alpha \leftarrow \tan \alpha = \frac{1}{3}$$

$$9 \sin^2 \alpha = 1 - \sin^2 \alpha \rightarrow 10 \sin^2 \alpha = 1 \rightarrow \sin \alpha = \frac{\sqrt{10}}{10} \quad \checkmark$$

بج ۳