

$$\text{الف) } \frac{17}{110} = \frac{\pi}{\text{Rad}} \Rightarrow \text{Rad} = \frac{17}{110} \times \frac{\pi}{1} = \frac{17\pi}{110}$$

$$\text{ب) } \frac{17}{110} = \frac{\pi}{\text{Rad}} \Rightarrow \text{Rad} = 17 \times \frac{\pi}{110} = \frac{17\pi}{110}$$

$$\text{ج) } \frac{17}{110} \times \frac{\pi}{\text{Rad}} \times \frac{110}{\pi} = 17$$

$$\text{د) } \frac{17}{110} \times \text{Rad} \Rightarrow \frac{17}{110} \times \frac{110}{\pi} = \pi$$

۲ ✓

$$\frac{17a}{a} G, \frac{a\pi}{a} \text{ Rad}, 10a^\circ$$

$$\frac{17a}{a} \times \frac{a}{10} = 1710a^\circ$$

$$\frac{a\pi}{a} \times 110 = 110a^\circ$$

$$10a + 1710a + 110a = 110 \rightarrow 19a = 110 \rightarrow a = \frac{110}{19} \left(5.79^\circ \right)$$

۱, ۷۵

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

$$\text{ب) } \frac{\frac{3}{4} + 1 + 3}{\frac{1}{2} - \frac{\sqrt{3}}{2}} = \frac{\frac{13}{4}}{\frac{1-\sqrt{3}}{2}} = \frac{13}{2(1-\sqrt{3})} \times \frac{1+\sqrt{3}}{1+\sqrt{3}} = \frac{13(1+\sqrt{3})}{2(1-3)} = \frac{13(1+\sqrt{3})}{-4}$$

۲ ✓

$$-\frac{1}{2} \times \frac{1}{2} + \frac{\sqrt{3}}{2} \times \frac{\sqrt{3}}{2} = \sin^2 \theta \Rightarrow -\frac{1}{4} + \frac{3}{4} = \sin^2 \theta \Rightarrow \sin^2 \theta = \frac{2}{4} \Rightarrow \sin \theta = \pm \frac{\sqrt{2}}{2} \xrightarrow{\sin \theta > 0} \sin \theta = \frac{\sqrt{2}}{2}$$

$$\sin \theta = \frac{\sqrt{2}}{2} \rightarrow \theta = \frac{\pi}{4} \rightarrow \tan \theta = 1$$

۲ ✓

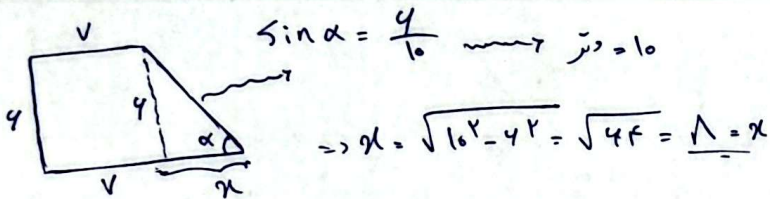
$$\frac{2 \times \frac{\sqrt{3}}{2} \left(1 - \frac{1}{2} \right)}{\left(1 - \frac{1}{2} \right)^2 - \frac{3}{4}} = \frac{\frac{2\sqrt{3}}{2} \times \frac{1}{2}}{\frac{1}{4} - \frac{3}{4}} = \frac{\sqrt{3}}{-\frac{1}{2}} = -2\sqrt{3} = \tan \theta \rightarrow \theta = 110^\circ \rightarrow \theta = \frac{11\pi}{18}$$

۲ ✓

$$\tan \theta = \omega, \quad \tan \theta = \frac{\sin \theta}{\cos \theta} = \omega \Rightarrow \sin \theta = \omega \cos \theta$$

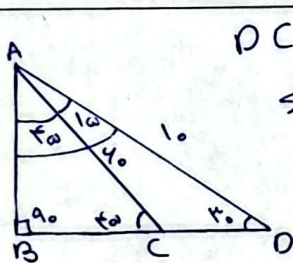
$$\frac{r \sin \theta - c \cos \theta}{r \sin \theta - c \cos \theta} = \frac{r(d \cos \theta) - c \cos \theta}{d \cos \theta - c \cos \theta} = \frac{1 \cdot c \cos \theta}{c \cos \theta} = 1$$

② ✓



$$\underline{u_s} = \frac{V + \frac{4 + V + 1}{\frac{v_o}{v_n}} + b}{\frac{v_o}{v_n}} = \underline{31}$$

② ✓

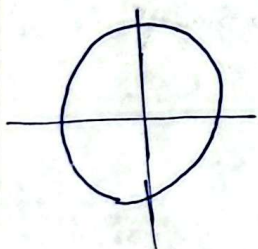


$PC = ?$
 $\sin 30^\circ = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{AB}{PC} = \frac{1}{4} \Rightarrow AB = 1 \times \frac{1}{4} = \frac{1}{4}$
 $\underline{AB = BC} \Rightarrow \underline{BC = \frac{1}{4}}$

$$\sin 40^\circ = \frac{\frac{BD}{\sin 40^\circ}}{\frac{AD}{\sin 40^\circ}} = \frac{BD}{AD} \Rightarrow BD = 10 \times \frac{\sqrt{3}}{4} = 2.5\sqrt{3}$$

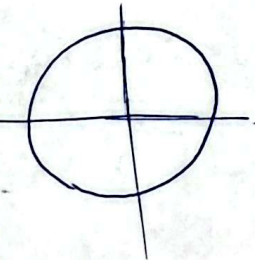
$$DC = BP - BC = \sqrt{w} - w \quad \text{D} \checkmark$$

Q ✓



الف) ناصیه سوم

$$\cos \angle O$$



(ب) نامہ درج

$$\cos \gamma_0$$

Q ✓

$$\tan x = \frac{1}{4}$$

$$\tan^2 + 1 = \frac{1}{\cos^2} \rightarrow \frac{1}{9} + 1 = \frac{1}{\cos^2} \rightarrow \frac{1}{\cos^2} = \frac{10}{9} \Rightarrow \cos^2 = \frac{9}{10}$$

$$\sin^2 x \cos^2 x = 1 \rightarrow \sin^2 x \cdot \frac{1}{1} = 1 \rightarrow \sin^2 x = \frac{1}{1} \rightarrow \sin x = \pm \frac{1}{\sqrt{1}} \quad \text{Probleme!} \quad \boxed{\sin x = \frac{1}{\sqrt{1}}} \quad 1.$$

Q ✓