

۲۰ عالی نوشتی!

الف) $\frac{D}{180} = \frac{R}{\pi}$

$\rightarrow \frac{14}{180} = \frac{3}{\pi} \rightarrow \frac{3\pi}{180}$ ✓

ب) $\frac{D}{180} = \frac{R}{\pi}$

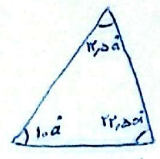
$\rightarrow \frac{125}{180} \times \frac{\pi}{180} = \frac{125\pi}{180} = \frac{25\pi}{36}$ ✓

ج) $\frac{2\pi}{121} \times \frac{180}{\pi} = 75^\circ$ ✓

د) $\frac{4\pi}{21} \times \frac{180}{\pi} = 10^\circ$ ✓

$\frac{D}{180} = \frac{Rad}{\pi} \quad \frac{D}{180} = \frac{6}{20}$

$\frac{125a}{\frac{360}{1}} = \frac{D}{180} \rightarrow \frac{125a}{1} = 125a$ ✓



$\frac{a\pi}{1} \times \frac{180}{\pi} = 22.5a$ ✓

$10^\circ + 125^\circ + 22.5^\circ = 4^\circ a \rightarrow 180$
 $a = 4$ ✓

الف) $\frac{1}{4} \times \frac{\sqrt{3}}{4} - \frac{\sqrt{3}}{4} \times \frac{1}{4} - 1 + 2 = \frac{1}{4}$ ✓

ب) $\frac{(\frac{1}{4})^2 + 1^2 + (\frac{\sqrt{3}}{4})^2}{\frac{2\sqrt{3}-\sqrt{3}}{4}} = \frac{13}{4} = \frac{13}{2\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{13\sqrt{3}}{6}$ ✓

$(-\frac{1}{4} \times \frac{1}{4}) + (\frac{\sqrt{3}}{4} \times \frac{\sqrt{3}}{4}) = \frac{1}{4}$
 $-\frac{1}{4} \quad \frac{3}{4}$

$\frac{1}{4} \rightarrow \sin^2$
 $\sin \rightarrow \frac{\sqrt{2}}{2} \rightarrow 45^\circ$

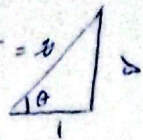
$\tan 45^\circ = 1$ ✓

$(1 \times \frac{1}{\sqrt{3}}) \times (1 - \frac{1}{5})$
 $\frac{1}{\sqrt{3}} \times \frac{4}{5}$
 $\frac{1}{5} \times \frac{1}{\sqrt{3}}$

$\tan \theta = \sqrt{3} \rightarrow 60^\circ$

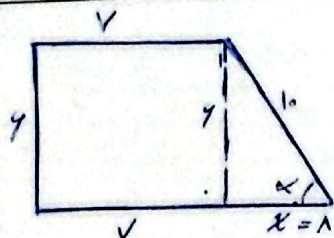
$\frac{D}{180} = \frac{R}{\pi} \rightarrow \frac{4}{180} \times \frac{\pi}{180}$
 $\rightarrow \frac{\pi}{45}$ ✓

$\frac{\frac{1}{\sqrt{3}}}{\frac{1}{5}} = \frac{5}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \sqrt{3}$

$$\tan \theta = \frac{\Delta}{\sqrt{14}} = \frac{1}{\sqrt{14}}$$


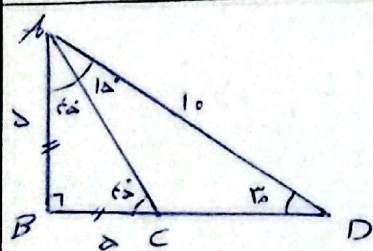
$$x^2 = \Delta^2 + 1^2 \quad x^2 = 14 \quad x = \sqrt{14} \rightarrow \sin \theta = \frac{\Delta}{\sqrt{14}} \quad \cos \theta = \frac{1}{\sqrt{14}}$$

$$\frac{r_x \frac{\Delta}{\sqrt{14}} - \frac{1}{\sqrt{14}}}{\frac{\Delta}{\sqrt{14}} - r_x \frac{1}{\sqrt{14}}} = \frac{\frac{14}{\sqrt{14}}}{\frac{1}{\sqrt{14}}} = 14 \quad \checkmark$$



$$x^2 = 10^2 - 4^2 = 100 - 16 = 84 \rightarrow x = \sqrt{84}$$

$$L = 4 + 1 + 1 + 10 + \sqrt{84} = 17 + \sqrt{84} \quad \checkmark$$



$$10 - (90 + 90) = 20$$

$$\hat{D} = 30^\circ$$

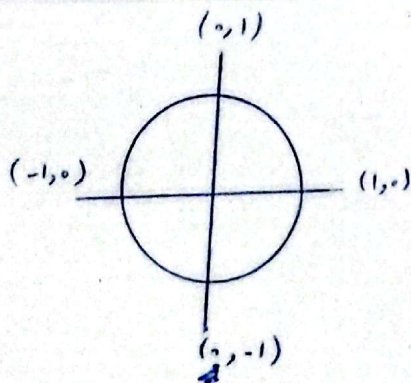
$$\sin 30^\circ = \frac{1}{2} \rightarrow AB = 2$$

$$BD = x \rightarrow x^2 = 10^2 - 2^2 \rightarrow 100 - 4 = 96 \quad x = \sqrt{96}$$

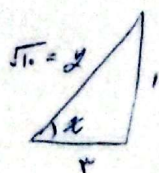
$$DC = \sqrt{96} - 2 \quad \checkmark$$

الف) 3 $\checkmark$

ب) 2 $\checkmark$



$$\tan x = \frac{1}{2}$$



$$y^2 = 1^2 + 2^2 = 5 \quad y = \sqrt{5}$$

$$\sin x = \frac{1}{\sqrt{5}} \quad \checkmark$$

چون ضلع 2
sin منتهی است