

زنگنه بنام خداوند
تالیف شماره ۱۴۵۰ هم دسترس نیست

الف) $\frac{27}{180} = \text{Rad} \Rightarrow \frac{27\pi}{180} = \frac{3\pi}{20}$	ب) $\frac{125}{180} = \text{Rad} \Rightarrow \frac{125\pi}{180} = \frac{25\pi}{36}$
ج) $\frac{5\pi}{12} = \frac{D}{180} \Rightarrow 900 = D = 150^\circ$	د) $\frac{4\pi}{9} = \frac{D}{180} \Rightarrow \frac{720}{9} = D = 80^\circ$

$\frac{G}{200} = \frac{D}{180} = \text{Rad} \rightarrow \frac{125\pi}{9} = \frac{D}{180} \Rightarrow \frac{5\pi}{12} = \frac{D}{180} \Rightarrow D = 125\pi$

$\frac{a\pi}{1} = \frac{D}{180} = \frac{180a}{1} \Rightarrow D = 22,5a$

$125a + 12,5a + 10a = 180 \Rightarrow 155a = 180 \Rightarrow a = \frac{180}{155} = \frac{36}{31}$

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

ب) $\frac{1}{\sqrt{3}} + 1 + (\frac{\sqrt{3}}{\sqrt{3}})^2 = \frac{1}{\sqrt{3}} + 1 + 1 = \frac{1}{\sqrt{3}} + 2 = \frac{1 + 2\sqrt{3}}{\sqrt{3}}$

$(\frac{1}{\sqrt{3}} \times \frac{1}{\sqrt{3}}) + (\frac{\sqrt{3}}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}}) = \sin^2 \theta \Rightarrow \sin \theta = \sqrt{\frac{1}{3}} = \frac{1}{\sqrt{3}}$

$\frac{1}{\sqrt{3}} = \frac{1}{\sqrt{3}} \Rightarrow \theta = 30^\circ$

$\frac{(\frac{1}{\sqrt{3}})(1 - (\frac{\sqrt{3}}{\sqrt{3}})^2)}{(1 - (\frac{\sqrt{3}}{\sqrt{3}})^2)^2} = \frac{(\frac{1}{\sqrt{3}})(\frac{2}{3})}{\frac{1}{9}} = \frac{2\sqrt{3}}{3} = \sqrt{3} = \tan \theta$

$\theta = 60^\circ$

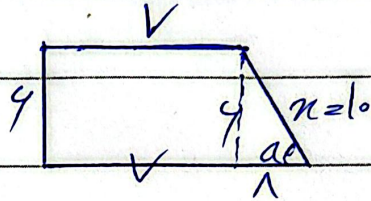
$\frac{90}{180} = \text{Rad} \Rightarrow \frac{90\pi}{180} = \frac{\pi}{2}$

$$\tan \theta = \Delta \Rightarrow \frac{\sin \theta}{\cos \theta} = \Delta \Rightarrow \sin^2 \theta = \Delta \cos \theta$$

4

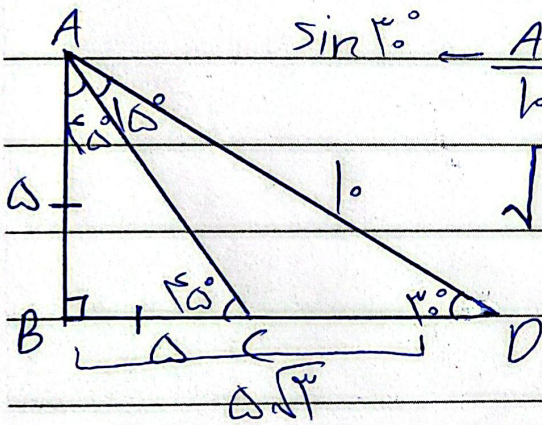
$$\frac{(\Delta \cos \theta) - \cos \theta}{\Delta \cos \theta - \cos \theta} = \frac{1 \Delta \cos \theta - \cos \theta}{\cos \theta} = \frac{1 \cos \theta}{\cos \theta} = 1$$

$$\frac{y}{x} = \frac{y}{10} \Rightarrow x = 10 \rightarrow \sqrt{100 - 3y} = 1$$



-V

$$10 + 1\Delta + y + V = 31$$

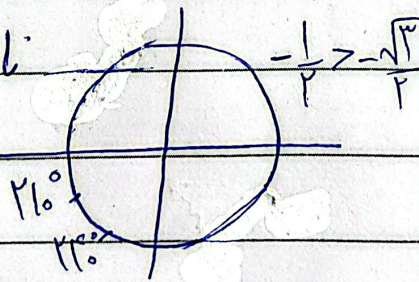


$$\sin 30^\circ = \frac{AB}{10} = \frac{1}{2} \Rightarrow AB = \Delta = BC \rightarrow 1\Delta$$

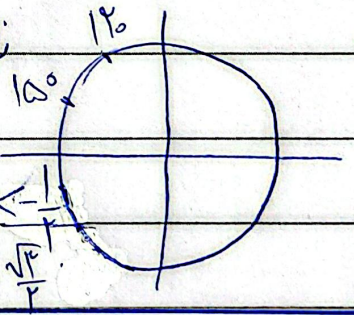
-A

$$\sqrt{100 - 3\Delta} = \Delta\sqrt{3} \quad CD = \Delta\sqrt{3} - \Delta$$

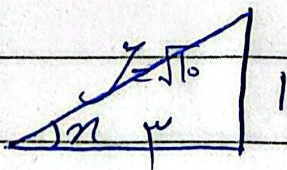
الف) $\frac{1}{P} > -\frac{\sqrt{3}}{P}$
 $120^\circ: \frac{1}{P}$
 $120^\circ: -\frac{\sqrt{3}}{P}$



ب) $\frac{1}{P} < -\frac{\sqrt{3}}{P}$
 $120^\circ: \frac{1}{P}$
 $150^\circ: -\frac{\sqrt{3}}{P}$



9



$$\tan \alpha = \frac{1}{3} \Rightarrow \frac{\sin \alpha}{\cos \alpha} = \frac{1}{3}$$

-10

$$y = \sqrt{(1)^2 + (3)^2} = \sqrt{10}$$

$$\frac{1}{\sqrt{10}} = \frac{\sqrt{10}}{10}$$