

لیما نصر اسحاقی - قلمب ۱۶ - دهم دختر C

① الف) $\frac{27}{180} = \frac{x}{\pi} \Rightarrow \frac{27\pi}{180} = \frac{3\pi}{20}$

ب) $\frac{125}{180} = \frac{x}{\pi} \Rightarrow \frac{125\pi}{180} = \frac{25\pi}{36}$

ج) $\frac{\frac{5\pi}{12}}{\pi} = \frac{x}{180} \Rightarrow \frac{5\pi}{12\pi} = \frac{x}{180} \Rightarrow x = 75$

د) $\frac{\frac{5\pi}{9}}{\frac{\pi}{1}} = \frac{x}{180} \Rightarrow \frac{5\pi}{9\pi} = \frac{x}{180} \Rightarrow x = 10$

② $\frac{D}{180} = \frac{G}{200} = \frac{Rad}{\pi} \rightsquigarrow$ ① $10a$

$\frac{D}{180} = \frac{\frac{12\omega a}{9}}{200} \rightsquigarrow D = \frac{400a}{\sqrt{2}} = 12.5a$

$\frac{12.5a}{10a} + \frac{12.5a}{12.5a} + \frac{12.5a}{12.5a} = 180$
 $a = f$

$\frac{D}{180} = \frac{\frac{a\pi}{1}}{\frac{\pi}{1}} \rightsquigarrow D = 22.5a$

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

ب) $\frac{\left(\frac{1}{\sqrt{2}}\right)^2 + 1 + (\sqrt{2})^2}{\sqrt{2} - \frac{1}{\sqrt{2}}} = \frac{\frac{1}{2} + 1 + 2}{\frac{2}{\sqrt{2}}} = \frac{\frac{13}{2}}{\frac{2}{\sqrt{2}}} = \frac{13\sqrt{2}}{4}$

④ $\sin 30^\circ \cos 40^\circ + \cos 30^\circ \sin 40^\circ = \sin^2 \theta$

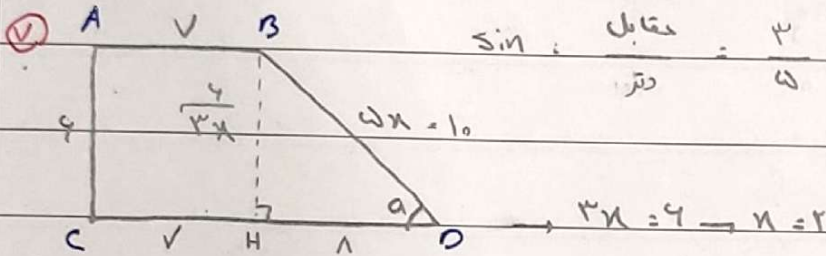
$\left(-\frac{1}{2} \times \frac{1}{2}\right) + \left(\frac{\sqrt{3}}{2} \times \frac{\sqrt{3}}{2}\right) = \sin^2 \theta \Rightarrow \sin \theta = \frac{\sqrt{3}}{2} = \cos \theta \rightsquigarrow \tan \theta = 1$

⑤ $\frac{\frac{2}{\sqrt{2}} \left(1 - \frac{1}{\sqrt{2}}\right)}{\left(1 - \frac{1}{\sqrt{2}}\right)^2} = \frac{2}{\sqrt{2}} = \tan \theta \rightsquigarrow \frac{2\sqrt{2}}{2} = \sqrt{2} \rightarrow \sqrt{2} \text{ یا } \tan 45^\circ$

$\frac{90}{180} = \frac{Rad}{\pi} \rightarrow \frac{\pi}{2}$

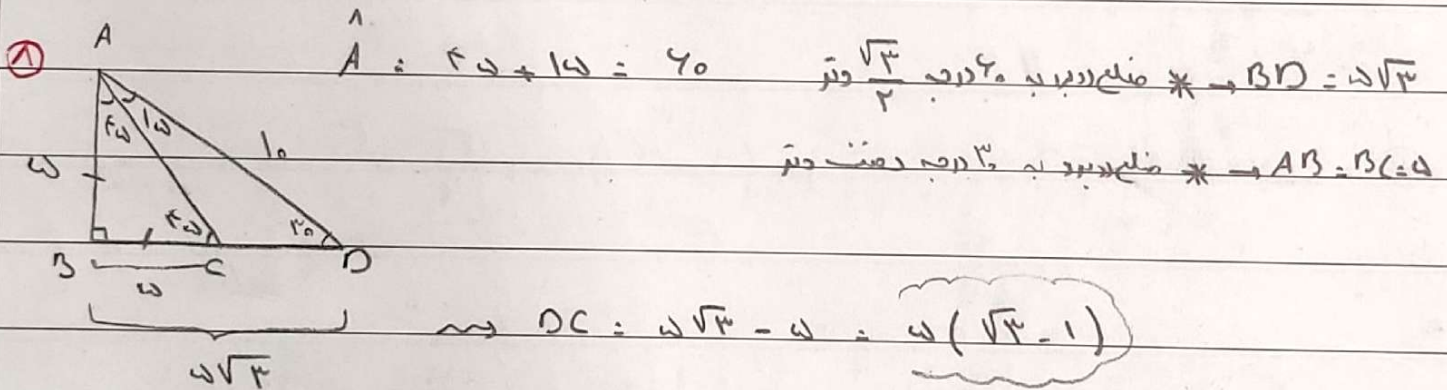
② $\tan \theta = \frac{\sin \theta}{\cos \theta} \rightarrow \cos \theta = \frac{\sin \theta}{\tan \theta}$

$$\frac{(3 \times \cos \theta) - \cos \theta}{\cos \theta} = \frac{1 \times \cos \theta}{\cos \theta} = 1$$

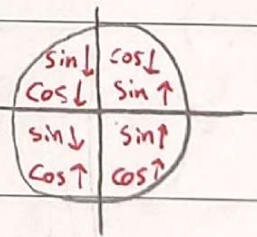


$100 = 34 + 4x \rightarrow HD = 1$

$\text{مساحت} = 7 + 7 + 4 + 1 + 1 = 20$



- ④ (الف) (ب) (ج) (د)



⑤ $\sin \theta \cos \theta = \frac{1}{2} \sin 2\theta$

$\tan \theta = \frac{1}{3} \rightarrow \cot \theta = 3$

$1 + \cot^2 \theta = \frac{1}{\sin^2 \theta} \rightarrow 10 = \frac{1}{\sin^2 \theta} \rightarrow \sin \theta = \frac{1}{\sqrt{10}}$

$\frac{\sqrt{10}}{10}$

دفعه