

لیما نصر اسحاقی - قلمب ۱۶ - دهم دختر C

۱۹.۵

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

$\frac{D}{180} = \frac{\frac{12\omega a}{9}}{200} \rightsquigarrow D = \frac{400a}{25} = 16\omega a$

$10a + 16\omega a + 22\omega a = 180$

③ ✓

$a = f$

$\frac{D}{180} = \frac{\frac{a\pi}{1}}{\frac{\pi}{1}} \rightarrow D = 22\omega a$

③ الف) $\left(\frac{1}{r} \times \frac{\sqrt{r}}{r}\right) - \left(\frac{\sqrt{r}}{r} \times \frac{1}{r}\right) = \left(\frac{1}{r} - \frac{\sqrt{r}}{r}\right) \rightsquigarrow \frac{\sqrt{r}}{r} - \frac{\sqrt{r}}{r} = 0 = \infty + 1$

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

④ ✓

④ $\sin^2 \theta_0 \cos \theta_0 + \cos^2 \theta_0 \sin \theta_0 = \sin^2 \theta$

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

⑤ ✓

⑤ $\frac{\frac{r}{\sqrt{r}} \left(1 - \frac{1}{r}\right)}{\left(1 - \frac{1}{r}\right)^2} = \frac{r}{\sqrt{r}} = \tan \theta \rightsquigarrow \frac{r\sqrt{r}}{r} = \sqrt{r} \rightarrow \sqrt{r} \text{ یا } \tan \theta_0$

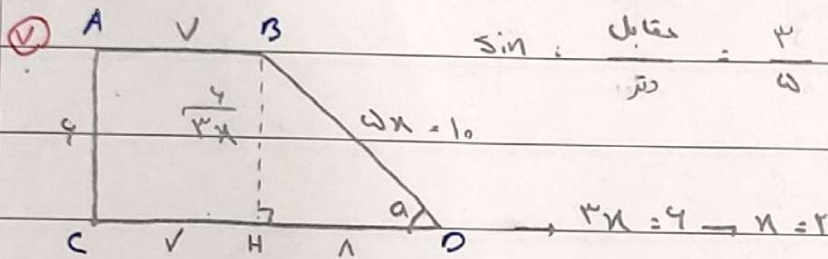
$\frac{90}{180} = \frac{Rad}{\pi} \rightarrow \frac{\pi}{2}$

⑥ ✓

Scanned with CamScanner

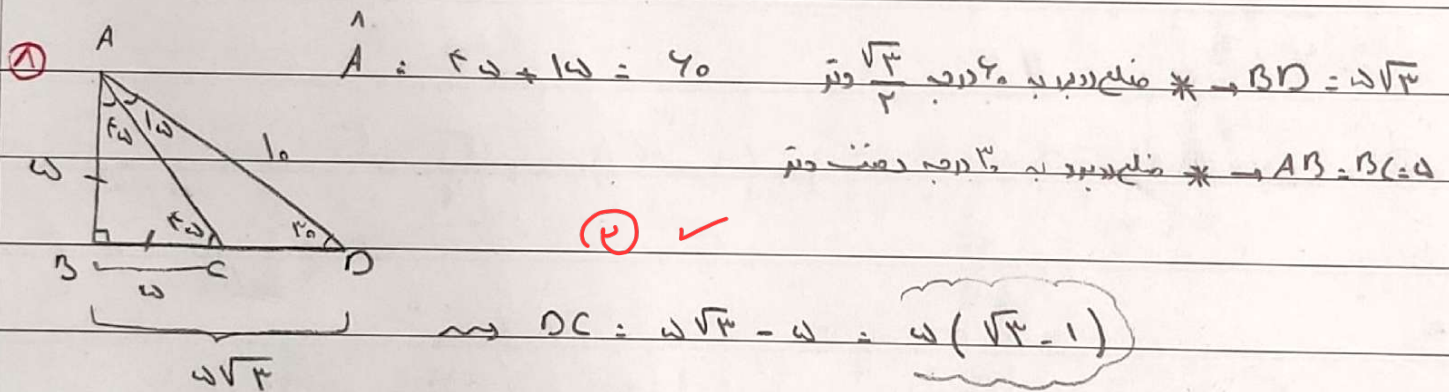
② $\tan \theta = \frac{\sin \theta}{\cos \theta} \rightarrow \cos \theta = \sin \theta$

$$\frac{(3 \times \cos \theta) - \cos \theta}{\cos \theta - \cos \theta} = \frac{1 \cos \theta}{\cos \theta} = 1 \quad \text{پ} \checkmark$$



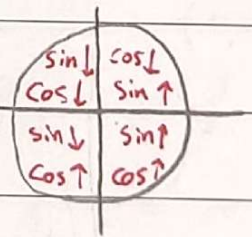
$100 = 34 + 40 \rightarrow HD = 1 \quad \text{پ} \checkmark$

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



④ (الف) (ب) (ج) (د)

$\text{پ} \checkmark$



⑤ $\sin \theta \cos \theta$ هر دو متغیر

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

$\text{پ} \checkmark$

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

دفعه ۱