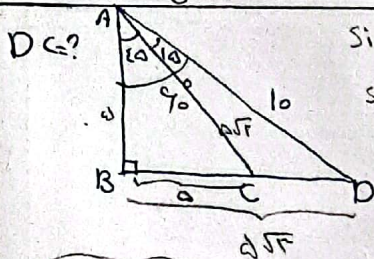


۱	$\frac{12.5}{180} = \frac{rad}{\pi} \rightarrow rad = \frac{12.5 \pi}{180} = \frac{25\pi}{36}$ $\frac{D}{180} = \frac{5}{12} \rightarrow D = 75^\circ$ $\frac{D}{180} = \frac{4}{9} \rightarrow D = 90^\circ$	۱
۲	$100 + \frac{12.5}{9} \theta + \frac{5}{9} rad = 180$ $\frac{5\pi}{18} - \frac{D}{180} = \frac{5}{12} \rightarrow \frac{180}{180} = D \rightarrow D = 12.5^\circ$ $\frac{12.5}{180} = \frac{D}{180} \rightarrow D = 12.5^\circ$ $12.5a + 27.5a + 10a = 180$ $a(12.5 + 27.5 + 10) = 180 \rightarrow a = \frac{180}{50} = 3.6$ $a = 3.6$	۲
۳	$\frac{1}{2} \cos 40^\circ \cos 20^\circ - \frac{\sin 40^\circ \sin 20^\circ}{\frac{1}{2}} = \frac{5\sqrt{2}}{2} - \frac{1}{2} \tan 20^\circ + \frac{1}{2} \cot 20^\circ$ از طرفی می توانیم بگوییم چون $\cos 40^\circ = \sin 50^\circ$ ب) $\frac{\tan 40^\circ + \tan 20^\circ}{\cot 40^\circ - \cot 20^\circ} = \frac{(\frac{\sqrt{3}}{3})^2 + (1)^2}{\sqrt{3} - \frac{\sqrt{3}}{3}} = \frac{\frac{4}{3}}{\frac{2\sqrt{3}-\sqrt{3}}{3}} = \frac{4}{\sqrt{3}-1}$ مقابل $\frac{13\sqrt{3}}{2}$	۳
۴	$-\sin 40^\circ \cos 40^\circ + \cos 40^\circ \sin 20^\circ = \sin^2 \theta$ $1 + \cot^2 \theta = \frac{1}{\sin^2 \theta} \rightarrow 1 + \cot^2 \theta = \frac{1}{\frac{1}{4}} \rightarrow 1 + \cot^2 \theta = 4 \rightarrow \cot^2 \theta = 3 \rightarrow \cot \theta = \sqrt{3} \rightarrow \tan \theta = \frac{1}{\sqrt{3}} \rightarrow \theta = 30^\circ$	۴
۵	$\frac{2 \tan 30^\circ (1 - \tan^2 30^\circ)}{(1 - \cot^2 30^\circ)^2} = \tan \theta \rightarrow \frac{2(\frac{\sqrt{3}}{3})(1 - (\frac{\sqrt{3}}{3})^2)}{(1 - (\frac{\sqrt{3}}{3})^2)^2} = \frac{\frac{2\sqrt{3}}{3} \times \frac{2}{3}}{(\frac{2}{3})^2} = \frac{\frac{4\sqrt{3}}{9}}{\frac{4}{9}} = \sqrt{3}$ زادیه 30° $\rightarrow$ $rad = \frac{\pi}{6}$ مقابل $rad = \frac{\pi}{6}$	۵

$$y = \sqrt{100 - 144} = \sqrt{48} = 1$$

$$6 + 7 + 10 + 8 + 7 = 38 \text{ جواب}$$



$$\sin 45^\circ = \frac{\sqrt{r}}{r}$$

$$\sin = \frac{\text{مقابل}}{\text{مائل}}$$

$$\cos \angle A = \frac{5}{7}$$

$$BC = \sqrt{AO - r} = \sqrt{r} =$$

$$\frac{\sqrt{x}}{x} = \frac{BD}{AD}$$

$$\frac{15}{7} = \frac{5}{AC}$$

$$\cos 40^\circ = \frac{1}{2}$$

$$\frac{1}{5} = \frac{AB}{10} \rightarrow AB = 2$$

$$CD = BD - BC \rightarrow CD = a\sqrt{r} - a$$

$$CD = \Delta(\sqrt{x} - 1)$$

دعا به سرم با افزایش ۵ سیفوس از سه ۱- کاهش و سیفوس از ۱- به ۵ افزایش می یابد

① $\sin \theta \cos \theta \downarrow$ ② $\sin \theta \downarrow$

$\cos \theta \uparrow$, $\sin \theta \downarrow$ ~~(الف)~~ (الف)

$$\tan \alpha = \frac{1}{\mu}$$

$n \rightarrow \text{real}$ $\sin n = ?$
 $\sin_n, \cos_n \{.$

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

$$\frac{10}{a} = \frac{1}{\cos \alpha} \rightarrow \cos \alpha = \frac{9}{10} \rightarrow \cos \alpha = \frac{r}{\sqrt{10}} \quad \text{naive} \rightarrow \frac{r}{\sqrt{10}}$$

$$\tan x = \frac{\sin x}{\cos x} \rightarrow \frac{1}{\sqrt{10}} = \frac{\sin x}{\frac{1}{\sqrt{10}}} \rightarrow \frac{1}{\sqrt{10}} = \frac{\sqrt{10} \sin x}{1} \rightarrow \sin x = \frac{-1}{\sqrt{10}} \quad \text{جواب}$$