

نام و نام خانوادگی: پسر/دختر: کلاس: پاسنامه تشریحی تکلیف شماره ۱۴۰۰

ا) $\frac{D^{2V}}{115} = \frac{Rad}{Tc} \rightarrow Rad = \frac{5\pi}{29}$

ب) $\frac{D^{120}}{115} = \frac{Rad}{Tc} \rightarrow Rad = \frac{40\pi}{35}$

ج) $\frac{D}{115} = \frac{Rad}{Tc} \rightarrow D = 1.5^\circ$

د) $\frac{D}{115} = \frac{Rad}{Tc} \rightarrow D = 1.5^\circ$

$D = 1.5^\circ$

$\frac{120}{20} = \frac{D}{115} \rightarrow D = 12/20^\circ$

$\frac{5\pi}{115} = \frac{D}{115} \rightarrow D = 22/20^\circ$

$10\alpha + 12/20\alpha + 22/20\alpha = 110$

$42\alpha = 110$

$\alpha = 2.6$

ا) $\left(\frac{1}{2} + \frac{1}{2}\right) - \left(\frac{1}{2} + \frac{1}{2}\right) = 1 + 1 = 2$

ب) $\frac{1}{3} + 1 + \frac{1}{3} = \frac{13}{3}$

$\left(\frac{1}{2} + \frac{1}{2}\right) + \left(\frac{1}{2} + \frac{1}{2}\right) = \frac{1}{2} + \frac{1}{2} = 1$

$\sin \theta = \frac{1}{2} = \frac{\sqrt{2}}{2} \rightarrow \sin \theta = \frac{\sqrt{2}}{2}, \cos \theta = \frac{\sqrt{2}}{2}$

$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1$

$\frac{1}{2} (1) + \tan \theta = \frac{\sin \theta}{\cos \theta} \rightarrow \sin \theta + \cos \theta = 1$

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

$\sin \theta = \frac{1}{2} \times \frac{2}{1} = \frac{1}{1} = 1$

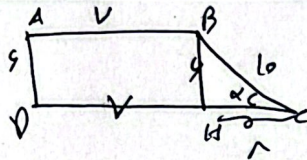
$$\tan \theta = 2$$

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

$$\sin \theta = 2 \cos \theta$$

$$\frac{w \sin \theta - e \cos \theta}{\sin \theta - \cos \theta} = \frac{w(2 \cos \theta) - e \cos \theta}{2 \cos \theta - \cos \theta}$$

$$\frac{12 \cos \theta - 8 \cos \theta}{\cos \theta} = \frac{1^2 \cos \theta}{\cos \theta} = 1^2$$

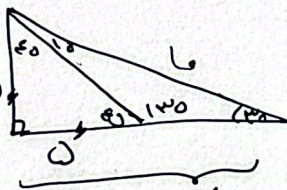


$$\sin \alpha = \frac{AB}{AC} \rightarrow \frac{3}{5} \rightarrow \frac{4}{5} \rightarrow BC = 4$$

$$AC^2 = AB^2 + BC^2 \rightarrow 5^2 = 3^2 + BC^2 \rightarrow BC = 4$$

$$AC = \sqrt{3^2 + 4^2} = 5$$

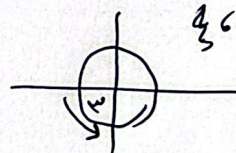
$$L_2 = 3 + 4 + 5 + 1 + 5 = 18$$



$$DC = 2\sqrt{3} - 2$$

$$BD = \frac{\sqrt{3}}{2} \times 2 = \sqrt{3}$$

$$\theta \uparrow \rightarrow \begin{cases} \sin \downarrow & \text{منفی} \\ \cos \uparrow & \text{مثبت} \end{cases}$$



$$\theta \uparrow \rightarrow \begin{cases} \sin \downarrow & \text{منفی} \\ \cos \downarrow & \text{منفی} \end{cases}$$



$$\tan x = \frac{\sin x}{\cos x} = \frac{1}{2} \rightarrow \cos x = 2 \sin x$$

$$\begin{cases} \sin = \\ \cos = \end{cases}$$

$$\sin^2 x + \cos^2 x = 1$$

$$\sin^2 x + \sin^2 x = 1$$

$$2 \sin^2 x = 1$$

$$\sin^2 x = \frac{1}{2}$$

$$\sin x = \frac{1}{\sqrt{2}}$$

$$\sin x = \frac{1}{\sqrt{2}} \rightarrow \sin x = \frac{\sqrt{2}}{2}$$

$$\frac{2 \tan \alpha (1 - \tan^2 \alpha)}{(1 - \tan^2 \alpha)^2} = \frac{2 \frac{\sqrt{3}}{3} (1 - \frac{1}{3})}{(1 - \frac{1}{3})^2} = \frac{\frac{2\sqrt{3}}{3}}{\frac{4}{9}} = \sqrt{3}$$

$$\tan \theta = \sqrt{3} \rightarrow \theta = \frac{\pi}{3} \leq 45^\circ$$