

دھم پنجشنبہ (خبر)

بنام پوردار و آروما

نہارفتی

(الف) $(\frac{\sqrt{2}}{2} - \frac{\sqrt{2}}{2})(\frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2}) = (\frac{\sqrt{2}}{2})^2 - (\frac{\sqrt{2}}{2})^2 = \frac{2}{4} - \frac{2}{4} = -\frac{1}{2}$ -1

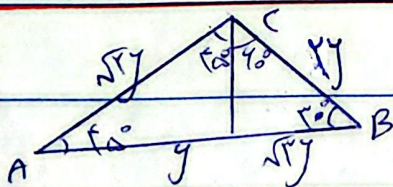
(ب) $\sqrt{(\frac{\sqrt{3}}{2})^2} = \sqrt{(\frac{3}{4})} = \frac{\sqrt{3}}{2}$ $\sqrt{(-\frac{\sqrt{2}}{2})^2} = \sqrt{(\frac{2}{4})} = \frac{\sqrt{2}}{2}$ $\sqrt{(\frac{1}{\sqrt{2}})^2} = \sqrt{(\frac{1}{2})} = \frac{1}{\sqrt{2}}$ $\sqrt{(\frac{1}{\sqrt{3}})^2} = \sqrt{(\frac{1}{3})} = \frac{1}{\sqrt{3}}$ $\frac{1+1}{2+1} = \frac{2}{3} = \frac{1}{\frac{3}{2}}$

(الف) $\sin 45^\circ = \frac{\sqrt{2}}{2} \rightarrow \frac{AH}{BA} = \frac{AH}{\sqrt{9}} = \frac{\sqrt{2}}{2} \Rightarrow AH = \frac{\sqrt{2} \cdot \sqrt{9}}{2} = \frac{3\sqrt{2}}{2}$ $HC = \sqrt{12} = 2\sqrt{3}$ -2

(ب) $\tan 30^\circ = \frac{\sqrt{3}}{3} \rightarrow \frac{AH}{HC} = \frac{AH}{2\sqrt{3}} = \frac{\sqrt{3}}{3} \Rightarrow AH = \sqrt{3}$ $\sin B = \frac{2\sqrt{3}}{4\sqrt{3}} = \frac{1}{2} = \frac{\sqrt{2}}{2} \rightarrow 45^\circ$

(الف) $\tan 60^\circ = \sqrt{3} = \frac{50\sqrt{3}}{BD} = \sqrt{3} \rightarrow BD = 50$ $\tan 30^\circ = \frac{\sqrt{3}}{3} = \frac{50\sqrt{3}}{BC} \rightarrow BC = 150$ -3 $n = 150 - 50 = 100$

(ب) $\tan 60^\circ = \sqrt{3} \Rightarrow \frac{BC}{2} = \sqrt{3} \Rightarrow BC = 2\sqrt{3}$ $DC = \sqrt{12+1} = \sqrt{13}$ $\sin \alpha = \frac{1}{\sqrt{13}} = \frac{\sqrt{13}}{13}$



$\sin 30^\circ \rightarrow \frac{1}{2} = \frac{y}{CB} \Rightarrow CB = 2y$ $\sqrt{y^2 + y^2} = \sqrt{2y^2} = \sqrt{2}y$ $\sqrt{y^2 + y^2} = \sqrt{2y^2} = \sqrt{2}y$ -4 $\frac{y + \sqrt{2}y}{\sqrt{2}y} = \frac{y(1 + \sqrt{2})}{\sqrt{2}y(\sqrt{2})} = \frac{\sqrt{2} + \sqrt{2}}{2}$

$S = \frac{1}{2} \sin \alpha AB$ $\hat{B}_1 = \hat{B}_2$ $\frac{\Delta ABE}{\Delta CBD} = \frac{4 \times 4}{12 \times 3} = \frac{4}{9}$ -5

الف $4 \times 2 \times \sqrt{3} = 4\sqrt{3} \rightarrow S = 4\sqrt{3}$

-6

ب $\frac{1}{2} \times 2 \times 2 \times \sin 120^\circ = 2\sqrt{3} \rightarrow S = 2\sqrt{3}$

$\tan \theta = \frac{1}{1} \rightarrow \frac{1-1}{1-(-1)} = \frac{1}{1} = 1 \rightarrow \tan \theta = 1 = 1 + \tan \theta$

-V

$\frac{1}{\cos \theta} = 1 + \frac{1}{1} = \frac{2}{1} \rightarrow \cos \theta = \frac{1}{2} \Rightarrow \cos \theta = \frac{1}{2} = \frac{\cos \theta}{\sqrt{3}} = \frac{1 \times \sqrt{3}}{\sqrt{3}}$

$y = x + \frac{a}{p} \rightarrow \tan = 1 \rightarrow 45^\circ \quad 120^\circ - (105^\circ + 15^\circ) = 0^\circ$

-1

$\tan 30^\circ = \frac{x}{\frac{a}{p}} \Rightarrow x = \frac{\sqrt{3}}{3} \times \frac{a}{p} = \frac{a\sqrt{3}}{3}$
 $0 = \frac{\sqrt{3}}{3} \times \frac{a\sqrt{3}}{3} + b \rightarrow b = -\frac{a}{3}$
 $m = \frac{1}{\sqrt{3}}$
 $mb = \frac{a}{3} \times -\frac{1}{\sqrt{3}} = -\frac{a\sqrt{3}}{3}$

$-\cos\left(\frac{5\pi}{4}\right) + \cos\left(\frac{5\pi}{4}\right) - (-\cot\left(\frac{5\pi}{4}\right)) = \cot\left(\frac{5\pi}{4}\right) = -\sqrt{3}$

-9

$\frac{\cos x - \sin x}{-\cos x + \sin x} = -\frac{(-\cos x + \sin x)}{-\cos x + \sin x} = -1$

-10