

$$\frac{2\pi}{180} = \frac{\text{Rad}}{\pi} \quad 2\pi \pi = 180 \text{ Rad} \Rightarrow \frac{2\pi}{180} \pi = \text{Rad} \Rightarrow \frac{\pi}{90} \pi$$

$$1) 125 \times \frac{\pi}{180} = \frac{125\pi}{180}$$

$$2) \frac{5\pi}{12} \times \frac{180}{\pi} = 75^\circ$$

$$3) \frac{4\pi}{9} \times \frac{180}{\pi} = 100^\circ$$

$$100^\circ \text{ و } \frac{450^\circ}{2} = 225^\circ \text{ و } 1215^\circ \leftarrow \frac{\text{Rad}}{\pi} = \frac{D}{180} = \frac{G}{200}$$

$$100^\circ + 225^\circ + 1215^\circ = 180^\circ$$

$$\begin{aligned} 50a &= 180 \\ a &= \frac{180}{50} \\ a &= 3.6 \end{aligned} \quad \boxed{a = 3.6}$$

$$\left(\frac{1}{2} \times \frac{\sqrt{3}}{2}\right) - \left(\frac{\sqrt{3}}{2} \times \frac{1}{2}\right) + 1 = \frac{\sqrt{3}}{4} - \frac{\sqrt{3}}{4} + 1 = 1$$

$$1) \frac{\frac{1}{2} + 1 + \sqrt{3}}{\sqrt{3} - \frac{1}{\sqrt{3}}} = \frac{\frac{1+\sqrt{3}}{2}}{\frac{\sqrt{3}-1}{\sqrt{3}}} = \frac{1+\sqrt{3}}{2} \times \frac{\sqrt{3}}{\sqrt{3}-1} = \frac{(1+\sqrt{3})\sqrt{3}}{2(\sqrt{3}-1)}$$

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

$$\frac{1}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{2} = \sin \theta \quad \theta = 45^\circ \quad \boxed{\tan 45^\circ = 1}$$

$$2 \times \frac{1}{\sqrt{3}} \left(1 - \frac{1}{2}\right) = \frac{2}{2\sqrt{3}} \leftarrow \text{مخرج}$$

$$\left(\frac{2}{2\sqrt{3}}\right)^2 = \frac{4}{12} \leftarrow \text{مخرج}$$

$$\frac{\frac{2}{2\sqrt{3}}}{\frac{4}{12}} = \frac{2}{2\sqrt{3}} \times \frac{12}{4} = \sqrt{3} \tan \theta$$

$$\begin{aligned} \tan 60^\circ &= \sqrt{3} \\ \text{Rad } 60^\circ &= \frac{\pi}{3} \end{aligned}$$

$$\tan \theta = 5 \quad \frac{\sin \theta}{\cos \theta} = 5 \quad \sin \theta = 5 \cos \theta$$

$$3(5 \cos \theta) - \cos \theta = 14 \cos \theta \quad \leftarrow \text{صورت} \quad \frac{14 \cos \theta}{\cos \theta} = 14$$

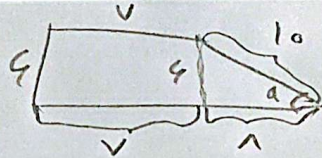
$$5 \cos \theta - 4 \cos \theta = \cos \theta \quad \leftarrow \text{مخرج}$$

از اونجا که داده است معریت

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$$\sin \alpha = \frac{6}{10} = \frac{\text{مقابل}}{\text{وتر}}$$

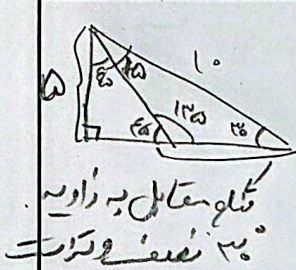
وتر = ۱۰



$$P = 6 + 7 + 10 + 10 = 33$$

دوران

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$$\sin 45 = \frac{\sqrt{2}}{2} = \frac{5}{\text{وتر}} \Rightarrow 10 = \sqrt{2}$$

$$\frac{10}{\sqrt{2}} = \text{وتر}$$

$$\frac{10}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} = \frac{10\sqrt{2}}{2} = 5\sqrt{2}$$

AC ضلع

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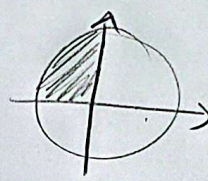
تایید چهارم (انت)



تایید کثرت ۳۰۰ و ۳۳۰ sin و cos

$$\cos = \frac{5}{10} \quad \cos = \frac{5\sqrt{2}}{10} \quad \sin = -\frac{5\sqrt{2}}{10} \quad \sin = -\frac{1}{2}$$

تایید دوم (انت)



تایید کثرت ۱۲۰ و ۱۵۰ sin و cos

$$\cos = -\frac{\sqrt{3}}{2} \quad \cos = -\frac{1}{2} \quad \sin = \frac{1}{2} \quad \sin = \frac{\sqrt{3}}{2}$$

$$\tan \alpha = \frac{1}{3} \quad \frac{\sin \alpha}{\cos \alpha} = \frac{1}{3} = \frac{\text{مقابل}}{\text{مجاور}}$$

$$\text{وتر}^2 = \text{مجاور}^2 + \text{مقابل}^2$$

$$1^2 + 3^2 = \text{وتر}^2$$

$$10 = \text{وتر}$$

$$\text{وتر} = 10$$

مشتق به خاطر تانژانت سوم

$$\sin \alpha = -\frac{1}{\sqrt{10}}$$

از اونجا که sin < 1

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