

19, 20

به دلیل ننوشتن اسم نمره شما صفر لحاظ می شود

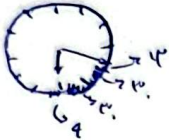


$$r \alpha \omega_0 + 4 + 2r \alpha \omega_0 \quad \checkmark$$

$$|\omega_0 \sin \alpha - \omega_0 h| = D$$

$$r \alpha \omega_0 - 4 = 2r \alpha \omega_0 \quad \checkmark$$

$$\omega_0 \alpha - 2r \alpha \omega_0 = 15 \quad \checkmark$$



$$\omega_0 + \omega_0 + 1r + 4 = 11 \quad \checkmark$$

$$|\omega_0 \sin \alpha - \omega_0 h| = D$$

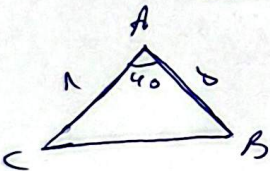
$$|11 \times \sin \alpha - 11| = 11 - 4 = 7 \quad \checkmark$$

$$\alpha = \frac{\pi}{2} = 90^\circ$$



$$S = \frac{\alpha}{r} R^2 = \frac{\pi}{r} \alpha \omega_0^2 = \frac{\pi}{r} \alpha 4 = \frac{\pi \pi}{2} \quad \checkmark$$

$$P = \alpha R + r R = \frac{\pi}{r} \alpha \omega_0 + 2r \alpha \omega_0 = \frac{\pi}{r} + 4 \quad \checkmark$$

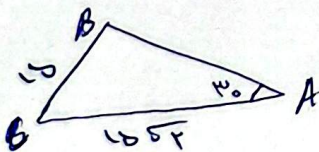


$$S = \frac{1}{2} a b \sin \alpha \rightarrow \sin \alpha = \frac{1}{r} \alpha \frac{\sqrt{r}}{r} = 15 \quad \checkmark$$

$$CB = \sqrt{4^2 + r^2 - 2 \times 4 \times r \cos \alpha} = \sqrt{16} = 4 \quad \checkmark$$

$$P = 4 + 1 + 4 = 9 \quad \checkmark$$

$$\hat{B} + \hat{C} = 180$$



$$\frac{a}{\sin A} = \frac{b}{\sin B} \Rightarrow \frac{10}{\frac{1}{r}} = \frac{10 \sqrt{r}}{\sin B} \rightarrow \sin B = \frac{r}{r} \quad \left\{ \begin{array}{l} B = 90^\circ \\ B = 270^\circ \end{array} \right. \quad \checkmark$$

$$\hat{B} + \hat{C} = 180 \rightarrow C = 90$$

$$\begin{aligned} \hat{B} &= \frac{\pi}{2} \\ 180 &= \frac{r \pi}{r} \quad \checkmark \end{aligned}$$

$$\frac{\pi}{r} = 16 \rightarrow \frac{r \tan \alpha + \tan \alpha}{r \tan 16 + \tan \alpha} = \frac{r \tan (\frac{\pi}{r} - \alpha) + \tan (\frac{\pi}{r} + \alpha)}{r \tan (\pi - \alpha) - \tan (\frac{\pi}{r} - \alpha)} = \frac{r \cot(\alpha) - \cot(\alpha)}{-r \tan \alpha - \cot \alpha}$$

$$\frac{\tan(\pi - \alpha) + \mu \tan(\pi + \alpha)}{\tan(\pi - \alpha) - \tan(\pi + \alpha)} = \frac{-\tan \alpha + \mu \tan \alpha}{-\tan \alpha - \tan \alpha} = \frac{\mu \tan \alpha}{-2 \tan \alpha} = -\frac{\mu}{2}$$

$$\frac{\mu}{\mu} = \frac{1}{1} \quad A = \frac{\mu \tan \alpha + \tan \alpha}{\mu \tan \alpha - \tan \alpha} = \frac{\mu \tan(\pi - \alpha) + \tan(\pi + \alpha)}{\mu \tan(\pi - \alpha) - \tan(\pi + \alpha)}$$

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$$\frac{\mu \cot \alpha - \cot \alpha}{-\mu \tan \alpha - \cot \alpha} = \frac{\cot \alpha}{-\mu \tan \alpha - \cot \alpha} = \frac{1}{-\mu - \frac{1}{\mu}} = \frac{-1}{\mu + 1}$$

$$\frac{\sin + \cos}{\sin - \cos} + \frac{\sin - \cos}{\sin \mu \cos \mu} = \mu \rightarrow \frac{\sin^2 + \cos^2 + \mu \sin \cos + \sin^2 \cos^2 - \mu \cos^2 \sin}{\sin^2 - \cos^2}$$

$$\frac{\mu}{\sin^2 - \cos^2} = \mu \rightarrow \mu = \mu(\sin^2 - \cos^2) \rightarrow \mu = \mu \sin^2 - \mu \cos^2 \rightarrow \frac{\mu + \mu \cos^2}{\mu} = \sin^2$$

$$\frac{\mu + \mu \cos^2}{\mu} = 1 - \cos^2 \rightarrow \mu + \mu \cos^2 = \mu - \mu \cos^2 \rightarrow 4 \cos^2 = 1 \rightarrow \cos^2 = \frac{1}{4}$$

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

$$\frac{\sin^2 - \mu \cos^2 \mu + 1}{\sin^2 \mu + \mu \cos^2 \mu - 1} = \mu \rightarrow \frac{1 - \cos^2 - \mu \cos^2 + 1}{1 - \cos^2 + \mu \cos^2 - 1} = \mu \rightarrow \mu \cos^2 = \mu \rightarrow \cos^2 = \frac{\mu}{\mu}$$

$$\tan^2 = \frac{\frac{\mu}{\mu}}{\frac{\mu}{\mu}} = \frac{\mu}{\mu}$$

$$\sin^2 = 1 - \frac{\mu}{\mu} = \frac{\mu}{\mu}$$

$$\cos 4\mu = \frac{1 + \cos 2\mu}{2} \rightarrow \cos 4\mu = \frac{1 + \cos 2\mu}{2}$$

$$\frac{\mu + \sqrt{\mu}}{\mu} = \frac{\mu + \sqrt{\mu}}{2} \rightarrow \cos 4\mu = \frac{\mu + \sqrt{\mu}}{2}$$

$$\sin 4\mu = \frac{1 - \cos 2\mu}{2} \rightarrow \sin 4\mu = \frac{1 - \cos 2\mu}{2} = \frac{1 - \left(\frac{\mu + \sqrt{\mu}}{2}\right)}{2}$$

$$\frac{\mu + \sqrt{\mu}}{2} \rightarrow \sin 4\mu = \frac{\mu + \sqrt{\mu}}{2}$$