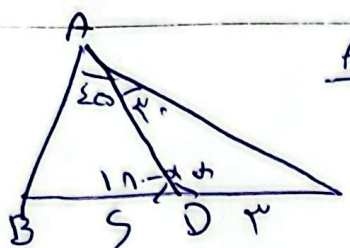


نام خانوادگی: ... کلاس: ۱۲ ... شماره: ...

$$OB^2 = OT^2 + BT^2 \rightarrow OB^2 = 1 + \cot^2 \alpha = \frac{1}{\sin^2 \alpha} \xrightarrow{OB = \frac{1}{\sin \alpha}}$$

$$AB = \frac{1}{\sin \alpha} - 1$$

۰



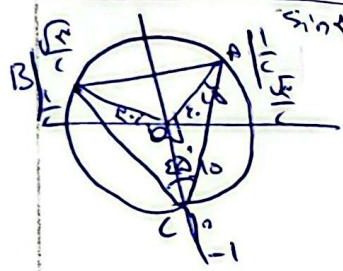
$$\frac{AB}{AC}$$

$$\sin \alpha = \sin(180^\circ - \alpha)$$

$$\frac{4}{\sin \alpha} = \frac{AB}{\sin(180^\circ - \alpha)} \Rightarrow \frac{4 \sin \alpha}{\sin \alpha} = AB$$

۲

$$\frac{AB}{AC} = \frac{4 \sin \alpha}{\sin \alpha} = \frac{4 \cdot 1}{1} = 4 \Rightarrow AC = \frac{4 \sin \alpha}{\sin \alpha}$$

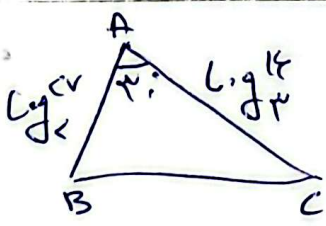


$$S_{ABC} = \frac{1}{r} + \frac{1}{r} + \frac{\sqrt{3}}{r} = \frac{2 + \sqrt{3}}{r}$$

$$\begin{aligned} AB &= \sqrt{2} \\ AC &= \\ BC &= \end{aligned}$$

$$\begin{aligned} AB &= \sqrt{2} \\ BC &= \sqrt{2} \\ AC &= \sqrt{2+2} \end{aligned} \rightarrow P = \sqrt{2} + \sqrt{2} + \sqrt{2+2}$$

۱.۵



$$S = \frac{1}{c} \cdot \frac{1}{2} \cdot \frac{1}{c} \cdot \frac{1}{c} \cdot \frac{1}{c} = 1$$

۲

$$h = \cos \alpha$$

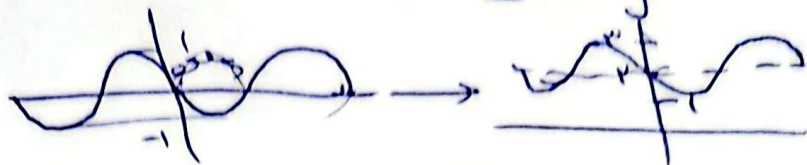
$$r \cos^2 \alpha - \cos^2 \alpha + \sin^2 \alpha \cos^2 \alpha \rightarrow r \cos^2 \alpha - \cos^2 \alpha + \sin^2 \alpha \cos^2 \alpha$$

$$\frac{1}{(\cos^2 \alpha + \sin^2 \alpha) \cos^2 \alpha} = 1 \rightarrow \sin^2 \alpha = 0$$

۲

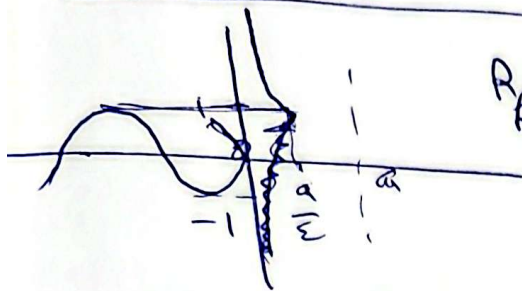
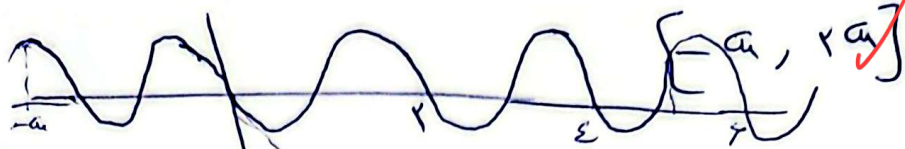
$$a) -Y \sin(\omega t) \cos(\omega t) \rightarrow -\sin(2\omega t) + Y \quad [-a, a]$$

$$T = \frac{Y}{\omega} \quad \omega = a$$



$$\Rightarrow Y \cos(\omega t - \frac{\pi}{2}) \rightarrow Y \cos(\omega t - \frac{\pi}{2}) = -Y \sin(\omega t) + Y$$

$$T = \frac{Y}{\omega} \quad \omega = a$$



$$R_p = [-1, 1]$$

①

$$a + b \sin(\omega t) \cos(\omega t) = \frac{b}{\varepsilon} \sin(\varepsilon \omega t) + a$$

$$\frac{1}{\varepsilon} \sin(\varepsilon \omega t) \cos(\varepsilon \omega t)$$

$$T = \frac{Y_{max} - Y_{min}}{Y} = \frac{a}{Y} = \frac{1}{\varepsilon} \quad |C| = \frac{a}{\varepsilon}$$

$$\frac{b}{\varepsilon} \frac{Y_{max} - Y_{min}}{Y} = \frac{\varepsilon}{\varepsilon} \cdot Y = \frac{b}{\varepsilon} \Rightarrow b = \varepsilon Y$$

$$a = \frac{Y_{max} + Y_{min}}{2} \quad \varepsilon = Y \Rightarrow |a| = Y \quad \frac{b}{a} = \frac{Y}{Y} = 1$$

$$\frac{Y}{a} \geq |b| \Rightarrow |b| \geq Y$$

$$a = \frac{Y - (-Y)}{2} = Y \quad a = -1$$

$$\cos \alpha = -\frac{1}{Y}$$



$$c = \frac{Y - \varepsilon}{2} = -1$$

$$\tan \alpha = ?$$

$$|\tan \alpha| = Y$$

$$f(-Y/\omega) \rightarrow f(-Y/\omega + 1(Y)) = f(-1/\omega + Y) = f(1/\omega)$$

$$Y = a \sin(\omega t) \rightarrow Y = a \sin(\omega t) \rightarrow a = \frac{Y}{\varepsilon} \quad Y = \frac{1}{\varepsilon} \quad \frac{1}{\varepsilon} = \frac{1}{Y}$$