

امروز یکشنبه

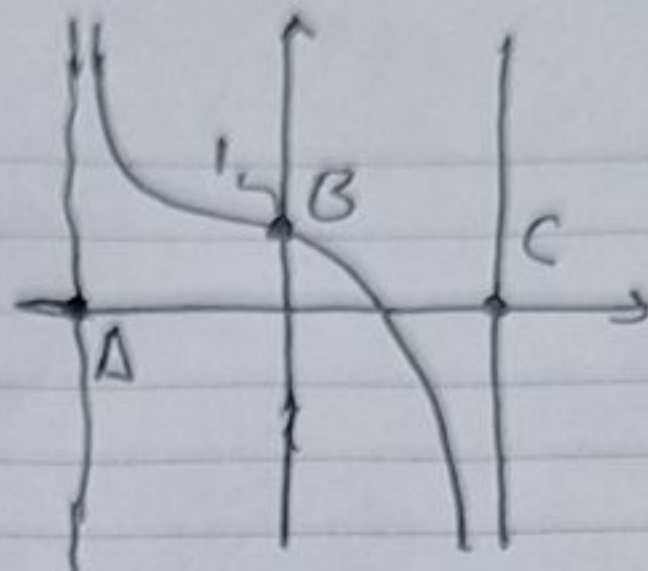
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یکشنبه

20

July
SUNDAY

2025 - 1404 $y = \tan(-\alpha + \frac{\pi}{\varepsilon})$



$$u=0 \Rightarrow y = \tan \frac{\pi}{\varepsilon} = 1$$

$$T = \frac{\pi}{-1} \Rightarrow C - A = \frac{\pi}{1}$$

$$S_{ABC} = \frac{\pi \times 1}{1} = \frac{\pi}{\varepsilon}$$

$$u' = (\sin \alpha)u - \frac{1}{\varepsilon} \frac{\cos^2 \alpha}{1 - \sin^2 \alpha} = 0 \Rightarrow u'(\sin \alpha)u - \frac{1}{\varepsilon} + \frac{\sin^2 \alpha}{\varepsilon} = 0$$

~~$$u = \frac{r}{c} \Rightarrow \frac{r}{c} - \frac{1}{\varepsilon} \sin \alpha + \frac{\sin^2 \alpha}{\varepsilon} = 0$$~~

$$u = \frac{r}{c} \Rightarrow \frac{r}{c} - \frac{1}{\varepsilon} \sin \alpha - \frac{1}{\varepsilon} (1 - \sin^2 \alpha) = 0 \Rightarrow \sin^2 \alpha - \varepsilon \sin \alpha + 1 = 0$$

$$\Rightarrow (\sin \alpha - \varepsilon)(\sin \alpha - 1) = 0 \Rightarrow \sin \alpha = \frac{1}{\varepsilon} \Rightarrow \cos^2 \alpha = \frac{1}{\varepsilon^2}$$

$$1 + \tan^2 \alpha = \frac{1}{\cos^2 \alpha} = \frac{1}{\frac{1}{\varepsilon^2}} = \varepsilon^2$$

$$1 + \tan^2 \alpha = \frac{1}{\cos^2 \alpha} \Rightarrow 1 + \frac{\sin^2 \alpha}{\cos^2 \alpha} = \frac{1}{\cos^2 \alpha} \Rightarrow \frac{\cos^2 \alpha + \sin^2 \alpha}{\cos^2 \alpha} = \frac{1}{\cos^2 \alpha} \Rightarrow \frac{1}{\cos^2 \alpha} = \frac{1}{\cos^2 \alpha}$$

$$\Rightarrow \tan \alpha = \varepsilon \quad \sin \alpha \cos \alpha = \frac{1}{\varepsilon} \Rightarrow \sin \alpha = \frac{1}{\varepsilon \cos \alpha} \Rightarrow \sin \alpha = \frac{1}{\varepsilon} \Rightarrow \cos \alpha = \frac{1}{\varepsilon}$$

$$\frac{1}{\cos^2 \alpha} = 1 + \tan^2 \alpha \Rightarrow \frac{1}{\cos^2 \alpha} = 1 + \varepsilon^2 \Rightarrow \cos^2 \alpha = \frac{1}{1 + \varepsilon^2} \Rightarrow \cos \alpha = \frac{1}{\sqrt{1 + \varepsilon^2}}$$

$$\sin^2 \alpha + \cos^2 \alpha = \frac{1}{\omega}$$

$$\sin^2 \alpha + \cos^2 \alpha = \frac{1}{\omega} \Rightarrow \sin^2 \alpha + \frac{1}{1 + \varepsilon^2} = \frac{1}{\omega} \Rightarrow \sin^2 \alpha = \frac{1}{\omega} - \frac{1}{1 + \varepsilon^2} \Rightarrow \sin^2 \alpha = \frac{1 + \varepsilon^2 - \omega}{\omega(1 + \varepsilon^2)}$$

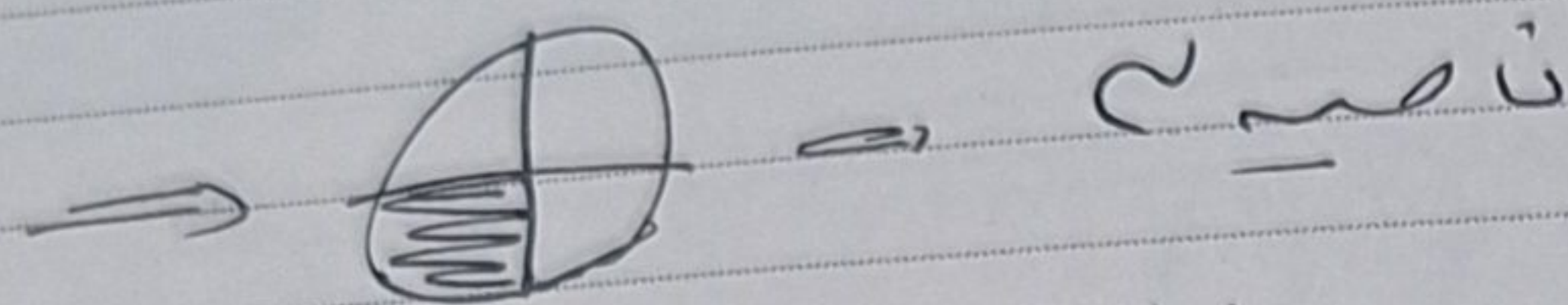
$$\cos^2 \alpha + \sin^2 \alpha = \cos^2 \alpha + \cos^2 \alpha + \sin^2 \alpha = (\cos^2 \alpha + 1) \cos^2 \alpha + 1 = \frac{1 + \varepsilon^2}{\omega}$$

M		7	14	21	28
T	1	8	15	22	29
W	2	9	16	23	30
T	3	10	17	24	31
F	4	11	18	25	
S	5	12	19	26	
S	6	13	20	27	

2025 - 1404

$$\frac{r \sin \alpha + \sin \alpha \cos \alpha}{r - r \cos \alpha} < 0 \Rightarrow \frac{\sin \alpha (r + \cos \alpha)}{r(1 - \cos \alpha)} < 0 \Rightarrow \sin \alpha < 0$$

$$\sin \alpha \tan \alpha - \frac{1}{\cos \alpha} > 0 \Rightarrow \frac{\sin \alpha - 1}{\cos \alpha} > 0 \Rightarrow -\cos \alpha > 0 \Rightarrow \cos \alpha < 0$$



$$\frac{r}{\sin \alpha} + \frac{r}{\cos \alpha} = 0 \Rightarrow \frac{r \cos \alpha + r \sin \alpha}{\sin \alpha \cos \alpha} = 0$$

$$\tan \alpha \cot \alpha = \frac{r}{\sin \alpha} - \frac{1}{\sin \alpha \cos \alpha} =$$

$$\frac{\frac{r}{\sqrt{10}} + \frac{r}{\sqrt{10}}}{\frac{1}{\sqrt{10}}} = \frac{-1}{\sqrt{10}} = -\frac{10}{10}$$

$$\frac{1}{\cos \alpha} = 1 + \tan \alpha = \cos \alpha + \frac{r}{\sqrt{10}}$$

$$\sin^2 \alpha = 1 - \cos^2 \alpha = \frac{8}{10} \Rightarrow \sin \alpha = \pm \frac{2}{\sqrt{10}}$$

نقطه و فرقی ندارد کسینوس یا سینوس
کسینوس در ربعان همواره منفی است

$$\frac{\sqrt{1 + \sin 2\alpha}}{\sin \alpha + \sin \alpha}$$

$$(1 - \sin^2 \alpha)(r \cos \alpha - 1)(1 - \tan^2 \alpha) = \cos \alpha \cos \alpha \cos \alpha$$

$$\cos \alpha - \sin^2 \alpha = \cos \alpha$$

$$\cos \alpha$$

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

$$\frac{\sqrt{10}}{\cos \alpha}$$

$$\frac{\sin \alpha \cos \alpha \cos \alpha \cos \alpha}{\cos \alpha}$$

$$\frac{1}{\sqrt{10}} \sin \alpha \cos \alpha \cos \alpha$$

$$= \frac{1}{\sqrt{10}} \cos \alpha$$

$$\sin \alpha + r \cos \alpha = r \Rightarrow \sin \alpha = r - r \cos \alpha = r(1 - \cos \alpha)$$

$$\Rightarrow 1 - \cos \alpha = 1 - \cos \alpha + r \Rightarrow 1 - \cos \alpha = r + \cos \alpha - 1 \Rightarrow \cos \alpha = r$$

$$\frac{1 + \cos \alpha}{r}$$

$$\cos \alpha = r \Rightarrow \cos \alpha = r + 1 - r \cos \alpha$$

$$\cos \alpha - 1 \cos \alpha = 0$$

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