

۱۵,۵

(۱۴)

دوازدهم رجب

باران تسلی

اسفند

۲۵

دوشنبه

۲۶ رمضان

MARCH

16 MONDAY

$$A = (\cos \alpha, \sin \alpha) \quad B = (1, 0)$$

۱,۵

$$AB = \sqrt{(1 - \cos \alpha)^2 + (0 - \sin \alpha)^2} = \sqrt{(1 - \cos \alpha)^2 + \sin^2 \alpha}$$

$$AB = \sqrt{1 - 2\cos \alpha + \cos^2 \alpha + \sin^2 \alpha} = \sqrt{2 - 2\cos \alpha}$$

2 0 2 6
1 4 4 7

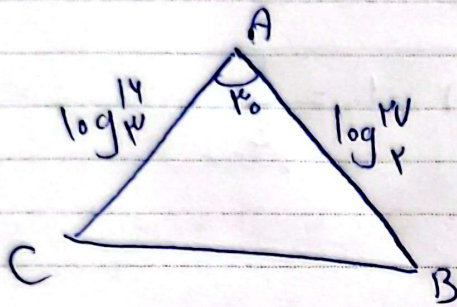
$$\Rightarrow AB = \sqrt{2 - 2\sqrt{1 - \sin^2 \alpha}} \quad \text{راه طریقی ۱، ۳، پستی صنف نوشته شد!}$$

$$\frac{BD}{\sin \hat{BAD}} = \frac{AB}{\sin \hat{ADB}} \Rightarrow \frac{r}{\sin \epsilon} = \frac{r \sin(\hat{ADB})}{\frac{\sqrt{2}}{2}} \quad - ۲$$

$$\frac{r \sin \hat{ADB}}{\sqrt{2}} = \epsilon \sqrt{2} (\hat{ADB})$$

$$\frac{r \sin \hat{ADC}}{\sin \epsilon} = \cancel{r} \sin \hat{ADC} \rightarrow \sin \hat{ADC} = \sin(180 - \hat{ADB})$$

$$\frac{AB}{AC} = \frac{r \sqrt{2} \sin \hat{ADB}}{\epsilon \sin \hat{ADB}} = \sqrt{2} \quad \checkmark$$



$$AC = \log_{\mu} 14$$

$$AB = \log_{\mu} 2$$

$$S_{ABC} = ?$$

آغاز نوروز تعطیل

فروردین

۲

یکشنبه

شعبان ۲

MARCH
22 SUNDAY

$$S_{ABC} = \frac{1}{2} ab \sin \hat{A}$$

$$\rightarrow \frac{1}{2} \times \mu \log_{\mu} 14 \times \log_{\mu} 2 \times \frac{1}{\mu}$$

$$S_{\Delta ABC} = \mu \frac{\log_{\mu} 14}{\log_{\mu} 2} \times \log_{\mu} \frac{2}{\mu} = \mu$$

$$\mu \cos^2 \alpha - \cos^2 \alpha - \sin^2 \alpha (\mu \sin^2 \alpha - 1) = 1 - \omega$$

$$\mu \cos^2 \alpha - \cos^2 \alpha - \sin^2 \alpha = 1$$

$$\sin^2 \alpha = \sqrt{\omega - 1}$$

$$\mu \cos^2 \alpha - \cos^2 \alpha - \mu \sin^2 \alpha + \sin^2 \alpha = 1$$

$$\mu (\cos^2 \alpha - \sin^2 \alpha) + \sin^2 \alpha - \cos^2 \alpha = 1$$

$$\mu (\cos^2 \alpha - \sin^2 \alpha) = 1 \rightarrow \cos^2 \alpha = 1 \rightarrow \sin^2 \alpha = 0$$

2 0 2 6
1 4 4 7

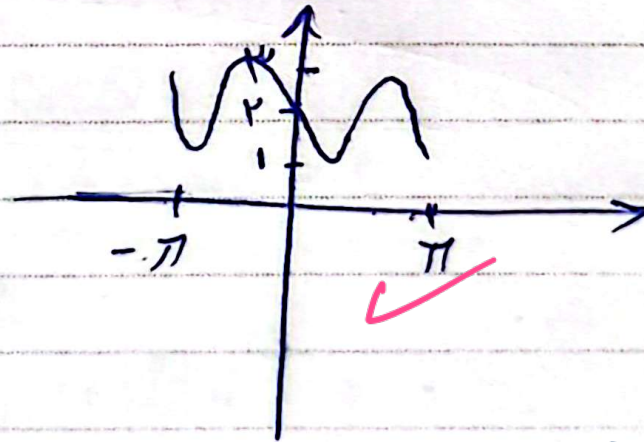
$$y = 2 \sin \left(\frac{\pi}{2} x + \frac{\pi}{4} \right) + 1$$

$$+ \frac{1}{2} \sin \pi x \rightarrow -\sin \pi x + 2$$

9

$$T = \frac{2\pi}{|b|} = \frac{2\pi}{2} = \pi$$

1



2



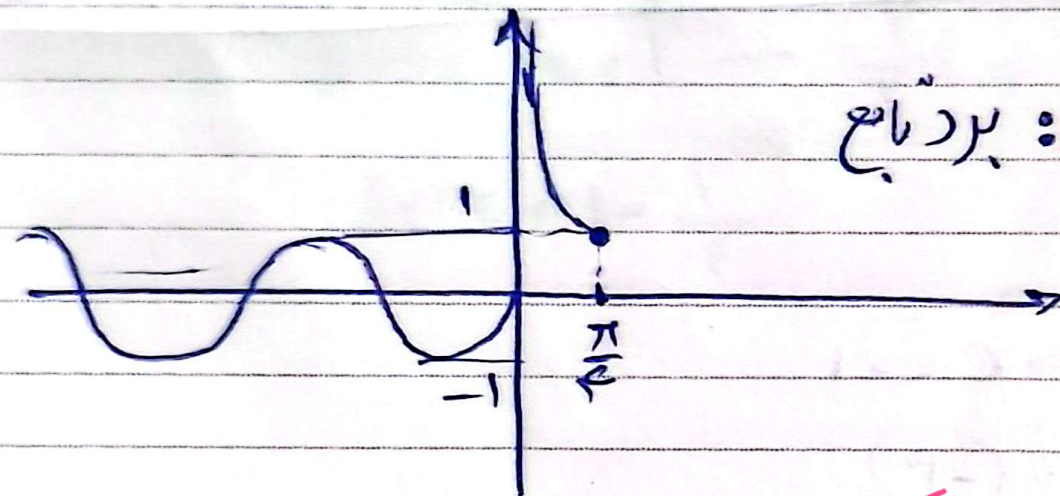
$$T = \frac{2\pi}{\pi} = 2$$

$$y = 2 \sin \left(\pi x + \frac{\pi}{4} \right) + 1 = -2 \sin \pi x + 1$$

روز بزرگداشت پروین اعتصامی

ایستاد

ش	ی	د	س	ج	پ	ح
۱						
۲	۳	۴	۵	۶	۷	۸
۹	۱۰	۱۱	۱۲	۱۳	۱۴	۱۵
۱۶	۱۷	۱۸	۱۹	۲۰	۲۱	۲۲
۲۳	۲۴	۲۵	۲۶	۲۷	۲۸	۲۹



بر دامنه: $[-1, +\infty)$

-V

②

$$\sin \alpha \cos \alpha = \frac{1}{\sqrt{2}} \sin 2\alpha \rightarrow \frac{1}{\sqrt{2}} \sin 2\alpha \cos 2\alpha = \frac{1}{2} \sin 4\alpha$$

$$\rightarrow f(x) = a + \frac{b}{\varepsilon} \sin(\varepsilon x)$$

$\sqrt{2}$

2 0 2 6
1 F F V

$$\text{Max: } \left| \frac{b}{\varepsilon} \right| + a = \varepsilon$$

$$T = \frac{\pi}{\sqrt{2}} - \frac{\pi}{1} = \frac{\omega\pi - \pi}{\sqrt{2}} = \frac{\varepsilon\pi}{1} = \frac{\sqrt{2}\pi}{\omega}$$

$$\text{Min: } \left| \frac{b}{\varepsilon} \right| + a = 0 \quad \xrightarrow{\text{der}} \frac{b}{\varepsilon} \rightarrow \oplus$$

$$\frac{\sqrt{2}\pi}{\varepsilon\sqrt{2}} = \frac{\sqrt{2}\pi}{\omega}$$

$$\rightarrow \begin{cases} a = \varepsilon \\ b = \varepsilon \end{cases}$$

$$\frac{b}{\varepsilon} = \sqrt{2} \rightarrow b = \sqrt{2}$$

$$\rightarrow \frac{bc}{a} = \frac{\omega}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} = \omega$$

$$\varepsilon c = \omega \rightarrow c = \frac{\omega}{\varepsilon}$$

$$f(x) = a \cos bx + c$$

$$\text{max} = |a| + c = \sqrt{2}$$

$$\text{min} = -|a| + c = -\varepsilon$$

-4

$$\sqrt{2}c = -\sqrt{2} \rightarrow c = -1$$

$$|a| = \sqrt{2} \rightarrow a = -\sqrt{2}$$

$$\frac{\sqrt{2}\pi}{|b|} = \pi \quad |b| = \sqrt{2} \rightarrow f(x) = -\sqrt{2} \cos \sqrt{2}x - 1$$

$$f(x) = 0 \rightarrow -\sqrt{2} \cos \sqrt{2}x - 1 = 0$$

$$\Rightarrow |\tan \alpha| = \left| \frac{\sin \alpha}{\cos \alpha} \right|$$

$$\cos \sqrt{2}x = -\frac{1}{\sqrt{2}} \quad \sin \sqrt{2}x = \pm \frac{1}{\sqrt{2}} \Rightarrow \sin \sqrt{2}x = \pm \frac{\sqrt{2}}{2} \Rightarrow \boxed{= \sqrt{2}}$$

0 2 6
F F V

$$T = 10$$

$$f(x) = f(x + 10)$$

$$K = +10$$

$$\frac{-99}{1} + 10 = \frac{10}{1}$$

$$f\left(\frac{-99}{1}\right) = f\left(\frac{10}{1}\right)$$

$$y = -\frac{1}{1}x + 1 \rightarrow -\frac{1}{1}\left(\frac{10}{1}\right) + 1 = \frac{1}{1}$$

$$f(10, 1) = \frac{1}{1}$$

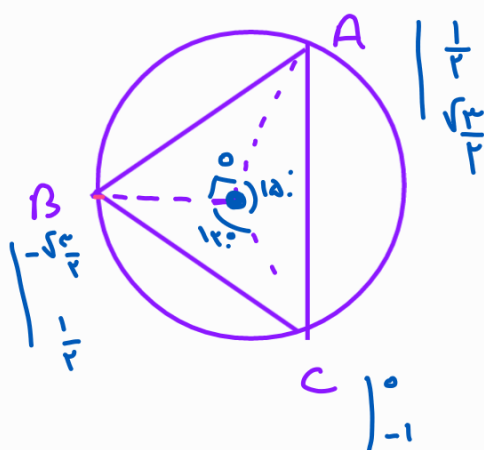
$$BT = \tan\left(\frac{\pi}{4} - \alpha\right) = \cot \alpha$$

OA و OT شعاع‌های دایره هستند
دور آن‌ها $\frac{1}{r}$ است.

$$OB^r = OT^r + BT^r \rightarrow OB^r = 1^r + \cot^r \alpha \rightarrow OB^r = 1 + \cot^r \alpha$$

$$OB^r = \frac{1}{\sin^r \alpha} \rightarrow OB = \frac{1}{|\sin \alpha|} \xrightarrow{\text{با توجه به } \alpha} OB = \frac{1}{\sin \alpha}$$

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



$$SAOC = 1 \times 1 \times \frac{1}{r} \times \frac{1}{r} = \frac{1}{r}$$

$$SOAR = 1 \times 1 \times \frac{1}{r} = \frac{1}{r}$$

$$SOBC = 1 \times 1 \times \frac{1}{r} \times \frac{\sqrt{r}}{r} = \frac{\sqrt{r}}{r}$$

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

$$BC^r = 1^r + 1^r - 1 \times 1 \times r \times \frac{1}{r} = 1 + 1 + 1 = r \rightarrow BC = \sqrt{r}$$

$$AC^r = 1^r + 1^r - 1 \times 1 \times r \times \frac{\sqrt{r}}{r} = 1 + 1 + \sqrt{r} \rightarrow AC = \sqrt{r + \sqrt{r}}$$

$$AB^r = 1^r + 1^r \rightarrow AB = \sqrt{r}$$

$$P_{ABC} = \sqrt{r} + \sqrt{r} + \sqrt{r + \sqrt{r}}$$