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$$\tan\left(\frac{\pi}{2} - \alpha\right) = \frac{TB}{OT} = TB$$

بافتن مثلث قائم

①

$$OB = \sqrt{1+6+2} \Rightarrow TB = \text{وتر}$$

1 cos α → OB

$$\rightarrow OB = \frac{1}{\sin \alpha}$$

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

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$$\frac{\sin \alpha}{4} = \frac{\sin 120^\circ}{AB} \Rightarrow \frac{\sqrt{3}}{4} = \frac{\sin \alpha}{AB} \Rightarrow AB = \frac{4 \cdot \sin \alpha}{\sqrt{3}} \quad (2)$$

$$\frac{\sin 120^\circ}{4} = \frac{\sin \alpha}{AC} \Rightarrow \frac{1}{4} = \frac{\sin \alpha}{AC} \Rightarrow AC = 4 \sin \alpha$$

$$\frac{AB}{AC} = \frac{\frac{4 \cdot \sin \alpha}{\sqrt{3}}}{4 \sin \alpha} = \frac{1}{\sqrt{3}} = \frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \boxed{\frac{\sqrt{3}}{3}} \quad (3)$$

$$\frac{1}{4} \times \left(\frac{1}{2} + \frac{\sqrt{3}}{4}\right) - \left(-\frac{3}{4} + 0 + -\frac{1}{4}\right) \Rightarrow S = \frac{3 + \sqrt{3}}{4} \quad (4)$$

$$\sqrt{\Delta x + \Delta y} \left\{ \begin{array}{l} AB = \sqrt{3} \\ AC = \sqrt{4 + \sqrt{3}} \\ BC = \sqrt{4} \end{array} \right\} \Rightarrow \text{مساحت} = \sqrt{4 + \sqrt{3}} + \sqrt{4} + \sqrt{3}$$

$$\frac{1}{4} \times \sin 120^\circ \times \log_{\sqrt{3}} 12 \times \log_{\sqrt{3}} 12 = \frac{1}{4} \times 12 \times \log_{\sqrt{3}} 12 \times \log_{\sqrt{3}} 12 \quad (5)$$

$$S = \sqrt{9 - 4(\log_{\sqrt{3}} 12)^2} + 2\sqrt{3}(\log_{\sqrt{3}} 12)^2 \quad (6)$$

$$Y \cos^2 \alpha - \cos^2 \alpha - \sin^2 \alpha (Y \sin^2 \alpha - 1) = Y \cos^2 \alpha - \cos^2 \alpha - Y \sin^2 \alpha + \sin^2 \alpha \quad (7)$$

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

$$1 = \cos^2 \alpha \leftarrow 1 = \cos^2 \alpha - \sin^2 \alpha \Rightarrow \boxed{\sin^2 \alpha = 0} \quad (8)$$

$$\text{مثال 1) } -Y \sin^2 \alpha \cos^2 \alpha + Y = Y - \sin^2 \alpha \quad (9)$$

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



$$T = \frac{2\pi}{1\pi} = 2$$

روش دوم

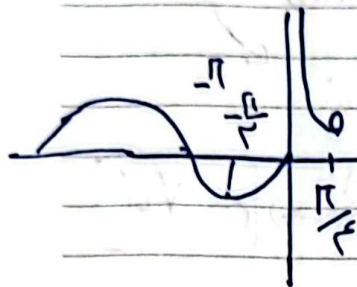
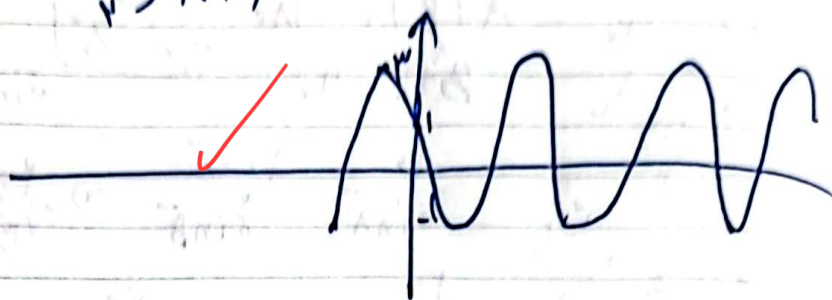
$$y = 2 \cos\left(m + \frac{1}{4}\pi\right)$$

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$$R = [-1, +\infty)$$

$$f(m) = a + b \sin(m) \cos(m) \cos(m) = a + \frac{b}{\sqrt{2}} \sin(m) \quad a = \frac{f+m}{2} = 1$$

$$T = \frac{2\pi}{a} \rightarrow \left(\frac{a}{f} \right) \quad f(m) = 1 + 2 \sin(m) \quad \frac{b}{a} = \frac{1 + \frac{a}{f}}{2} = \frac{1}{2}$$

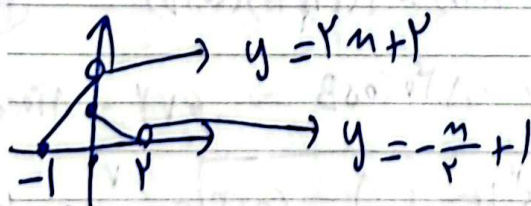
$$C = \frac{2-f}{2} = 1$$

$$|a| = \frac{2-(f-f)}{2} = 1 \Rightarrow a = 1$$

$$\Rightarrow f(m) = -2 \cos(m-1) \quad \cos 2\alpha = \frac{1}{\sqrt{2}}$$

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

$$\left| \tan 2\alpha \right| = \left| \frac{2 \tan \alpha}{1 - \tan^2 \alpha} \right| \rightarrow \left| \frac{2 + \sqrt{2}}{-1} \right| = \frac{2 + \sqrt{2}}{1}$$



$$m = \text{درجه تناوب} \quad (10)$$

$$\frac{m \cdot \frac{1}{2}}{m} = 1 + \frac{1}{2} = \frac{3}{2}$$

روز بزرگداشت شهدای منا

$$y = -\frac{m}{2} + 1 \Rightarrow -\frac{(1/2)}{2} + 1 = \frac{3}{4}$$

$$y = -\frac{m}{2} + 1 \Rightarrow \text{درجه تناوب} \leftarrow f\left(-\frac{m}{2} + 1\right)$$