

نام و نام خانوادگی: پسر/دختر
 پاسخنامه تشریحی تکلیف شماره ۱۴ کلاس دوازدهم
 A

$$\begin{aligned} \angle B &= \tan(90^\circ - \alpha) = \cot \alpha & OT = 1 \Rightarrow OB &= 1 + \cot \alpha = \frac{1}{\sin \alpha} \\ OA &= 1 & \Rightarrow OB &= \frac{1}{\sin \alpha} \end{aligned}$$

$$\Rightarrow OB - OA = AB \Rightarrow \frac{1}{\sin \alpha} - 1 = AB$$

$$\frac{y}{\sqrt{2}} = \frac{AB}{\sin \alpha}, \quad \frac{3}{2} = \frac{AC}{\sin \alpha}$$

$$\frac{\frac{4\sqrt{2}}{\sqrt{2}}}{\frac{y}{\sqrt{2}}} = \frac{\frac{AB}{\sin \alpha}}{\frac{AC}{\sin \alpha}} = \frac{AB}{AC} = \sqrt{2}$$

$$A\left(\frac{\sqrt{3}}{2}, \frac{\sqrt{3}}{2}\right), B\left(-\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$$

$$C(0, -1) \quad \left[\sqrt{2} + \sqrt{2} + \sqrt{3} \right]$$

$$AB: \sqrt{\left(\frac{\sqrt{3}}{2} - \frac{1}{2}\right)^2 + \left(\frac{1}{2} - \frac{\sqrt{3}}{2}\right)^2} = \sqrt{2}$$

$$AC: \sqrt{\left(\frac{\sqrt{3}}{2}\right)^2 + \left(\frac{1}{2} + 1\right)^2} = \sqrt{2 + \sqrt{3}}$$

$$BC: \sqrt{\left(\frac{\sqrt{3}}{2}\right)^2 + \left(\frac{1}{2} + 1\right)^2} = \sqrt{3}$$

$$AB^2 + BC^2 - 2(AB)(BC) \cos B = AC^2$$

$$2 + 3 - 2\sqrt{2} \cos B = 2 + \sqrt{3}$$

$$\Rightarrow \cos B = \frac{\sqrt{3}-1}{2\sqrt{2}} \Rightarrow \sin B = \frac{\sqrt{2+\sqrt{3}}}{2}$$

$$\frac{1}{2} \times \sin B \times \sqrt{2} \times \sqrt{3} = 5$$

$$\frac{1}{2} \times \frac{\sqrt{2+\sqrt{3}}}{2} \times \sqrt{6} = 5$$

الف

$$\frac{1}{2} \times \frac{1}{2} \times \log_2 12 \times \log_2 27 = \frac{1}{4} \times 4 \log_2 3 \times 3 \log_2 3$$

$$= \frac{1}{4} \times 4 \log_2 3 \times \frac{3}{\log_2 3} = 3$$

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

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

$$r \cos \alpha \cos \alpha - \sin \alpha r \cos \alpha = 1$$

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

$$(r \cos \alpha = 1 \Rightarrow \sin \alpha = 0 \Rightarrow \sin 2\alpha = 0$$

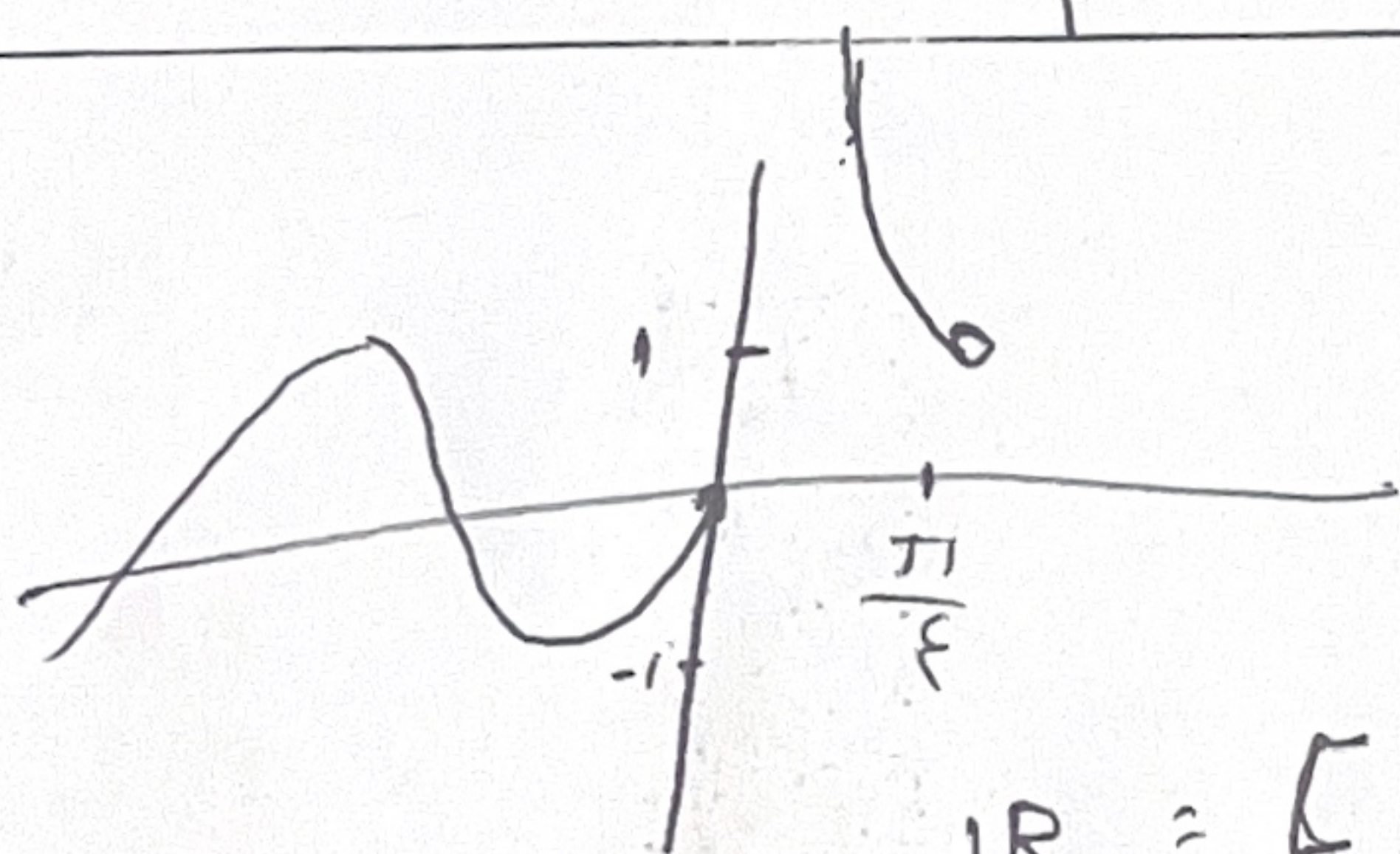
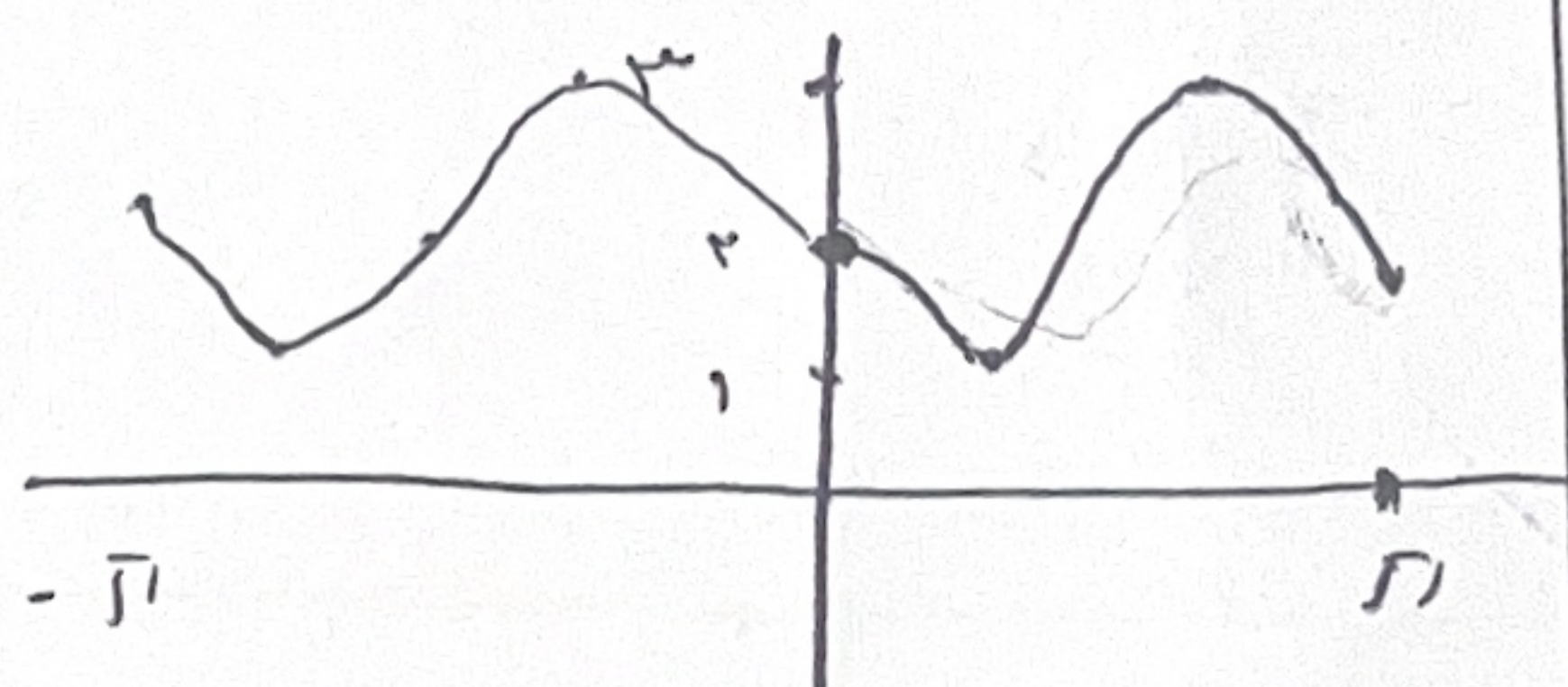
$$r \cos\left(\pi n + \frac{\pi}{2}\right) + 1$$

$$\text{ب. } \omega_0 = \frac{2\pi}{T} = 2$$

(ب)

$$- \sin 2n + 2$$

$$\text{ب. } \omega_0 = \frac{2\pi}{T} = 2$$



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

$$f(x) = a + b \sin\left(\frac{x}{T}\right) \Rightarrow a = \frac{T + 0}{2} = 1$$

$$\Rightarrow \frac{b}{T} = 1 \Rightarrow b = 1$$

$$\frac{T}{2} = \frac{\pi}{2} - \frac{\pi}{2} = \frac{x}{2} \Rightarrow T = \frac{2\pi}{\omega} \Rightarrow \frac{2\pi}{T} = \frac{x}{\omega} \Rightarrow \omega = \frac{x}{1}$$

$$\Rightarrow \frac{b}{a} = 1, \omega$$

$$c = -\frac{T + 1}{2} = -1 \Rightarrow a = 1$$

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

$$\Rightarrow f(x) = 2 \cos(x) - 1 \Rightarrow 2 \cos(x) - 1 = 0 \Rightarrow \cos(x) = \frac{1}{2}$$

$$1 + \tan^2 \alpha = 9 \Rightarrow \tan^2 \alpha = 8 \Rightarrow \tan \alpha = \sqrt{8}$$

$$\left| \tan 2\alpha \right| = \left| \frac{2 \tan \alpha}{1 - \tan^2 \alpha} \right| = \left| \frac{2 \sqrt{8}}{1 - 8} \right| = \frac{2\sqrt{8}}{7}$$

$$-\frac{w}{\omega} = -1$$

$$-y/1 + w + w = -0/1$$

$$\Rightarrow f(-\frac{w}{\omega}) = f(-0/1)$$

$$y = r = r_n \Rightarrow y = r_{n+1}$$

$$\Rightarrow f(-\frac{w}{\omega}) = -\frac{1}{\omega} + r = \frac{r}{\omega} = f(-\frac{w}{\omega})$$

10

1

9

1