

$$\{(1, 4a), (1, a^2+3), (3, a)\}$$

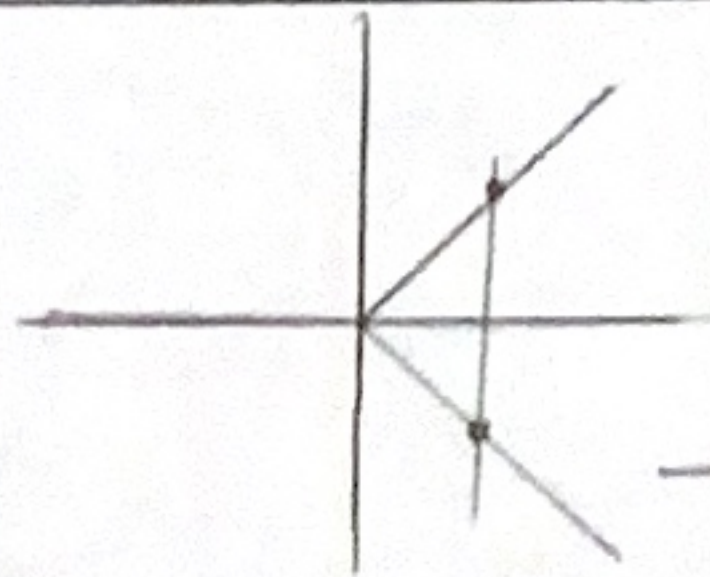
$$\begin{cases} 1 \rightarrow 4a \\ 1 \rightarrow a^2+3 \end{cases} \rightarrow 4a = a^2+3 \rightarrow a^2-4a+3=0 \rightarrow (a-3)(a-1)=0$$

به ازای هر دو مقدار a رابطه تابع است $\rightarrow$

$$a=1 \rightarrow \{(1, 4), (1, 4), (3, 1)\}$$

$$a=3 \rightarrow \{(1, 12), (1, 12), (3, 9)\}$$

$$|y| = |x| \Rightarrow y = \pm |x|$$



چون خط عبور ۳ بار
این را قطع کرده پس تابع نیست

حسب هر مثبت هر

تابع است $\Rightarrow$ فقط نقطه $(1, 1)$ است $\Rightarrow x=1, y=0 \rightarrow y=0, x=1 \rightarrow y=0, x=1$

$$|y-1| = \sqrt{x-2} \rightarrow x=3 \rightarrow |y-1| = 1 \Rightarrow y-1 = \pm 1 \Rightarrow y=2 \text{ or } y=0$$

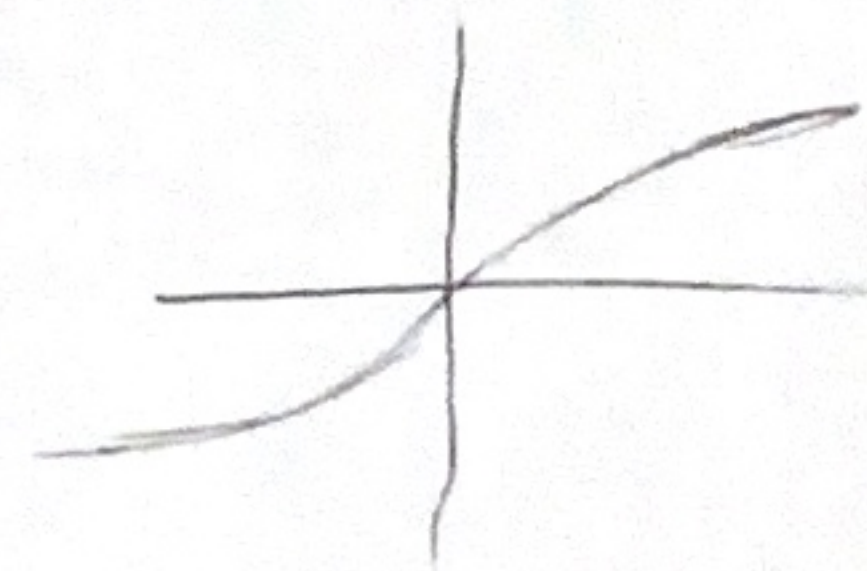
$$y^5 - y = \frac{x^2}{4} \rightarrow x=0 \rightarrow y(y^4-1)=0 \Rightarrow y=1, y=-1, y=0$$

$$\sin^2 x + \cos^2 y = 1 \rightarrow x=0 \rightarrow \cos^2 y = 1 \Rightarrow y=0 \text{ or } y=2\pi$$

هر مقدار y در $x=0 \Rightarrow 0 \times y = 0 \Rightarrow x=0 \Rightarrow y=0$

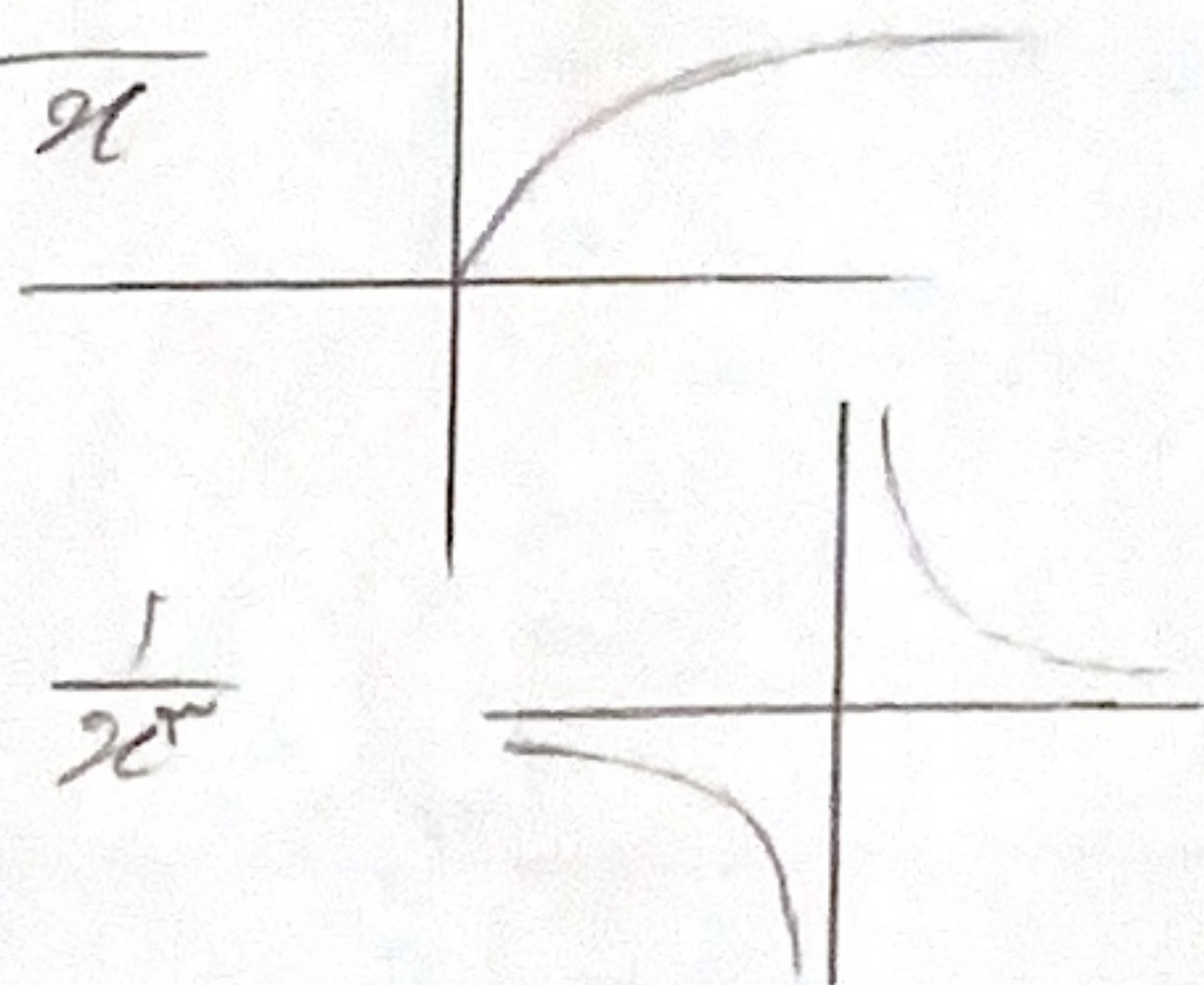
تابع نیست $\rightarrow y-1 = \pm 3 \Rightarrow |y-1| = 3 \Rightarrow x=1 \rightarrow 2x^2 + |y-1| = 4x \rightarrow x=1 \rightarrow y=4 \text{ or } y=-2$

$$y^5 - 3x = 0 \Rightarrow y = \sqrt[5]{3x} \Rightarrow y = \sqrt[5]{-3x}$$

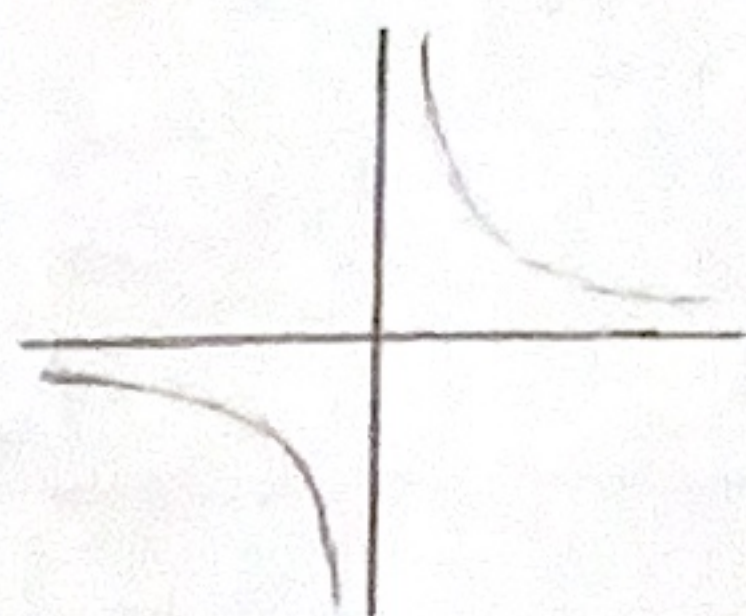


تابع است

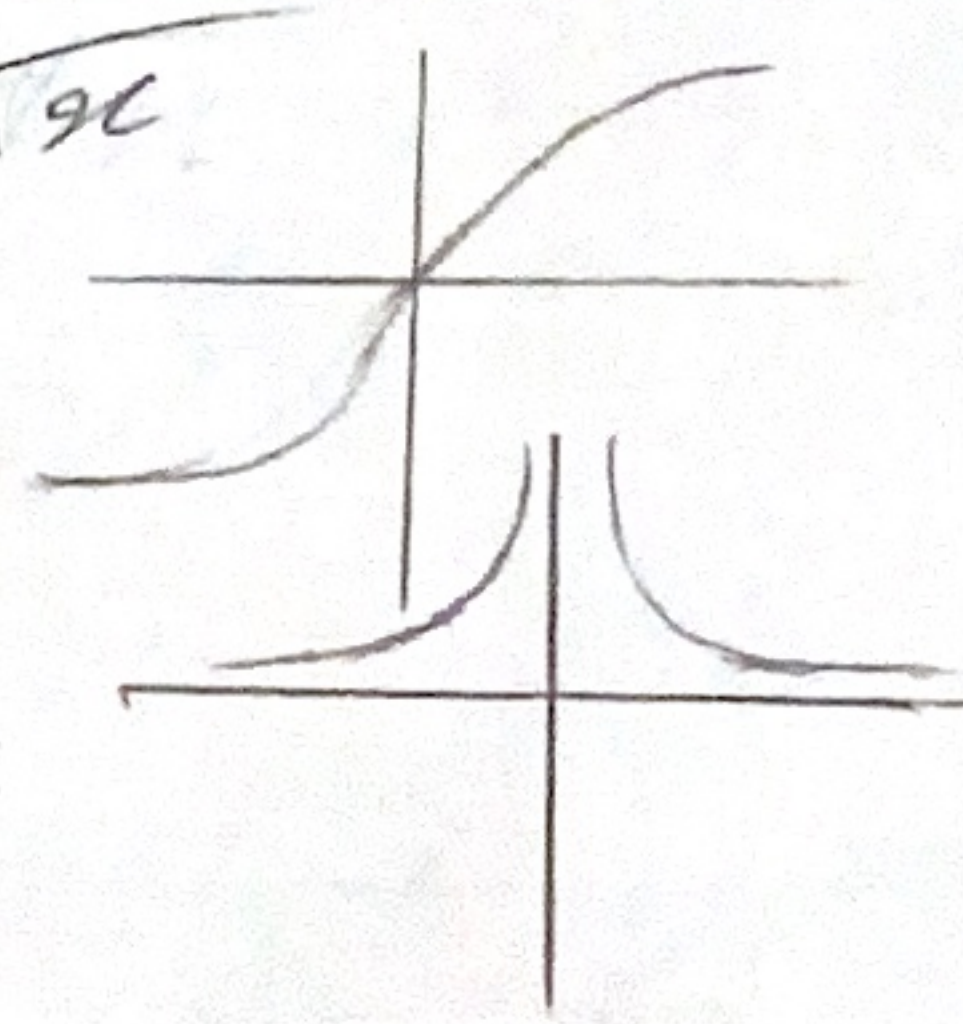
الف) $\sqrt{x}$



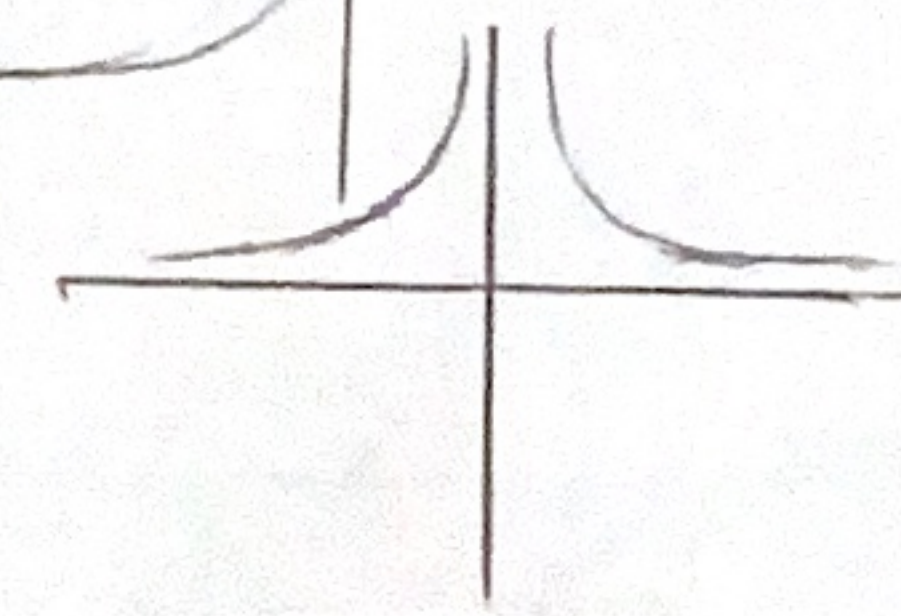
ج) $\frac{1}{x^3}$

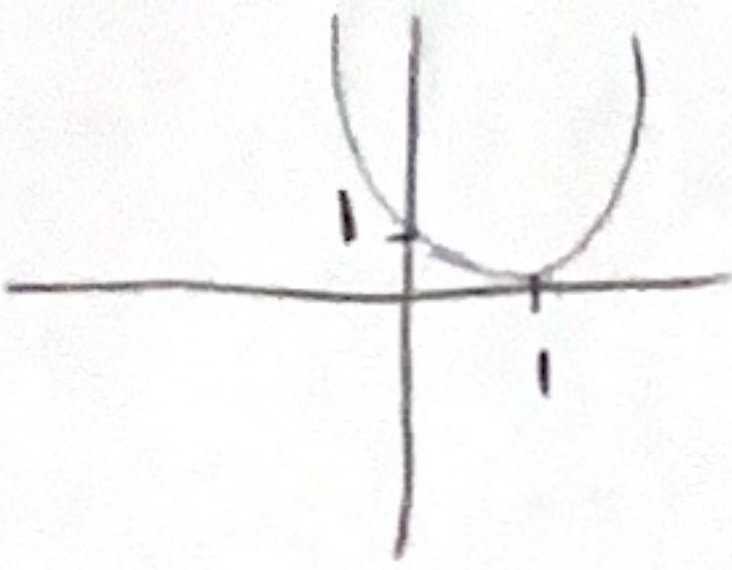
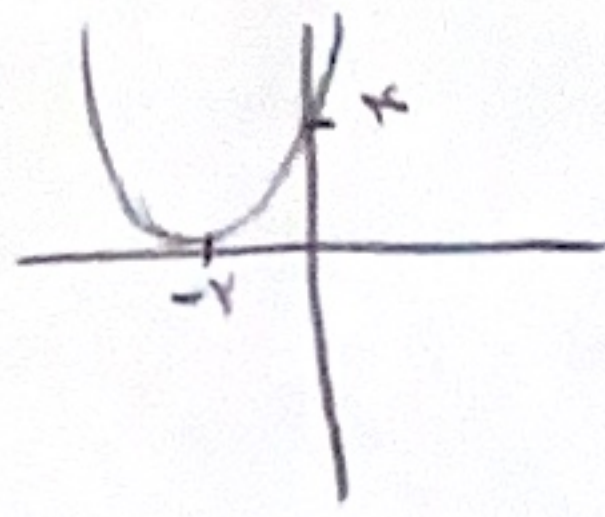
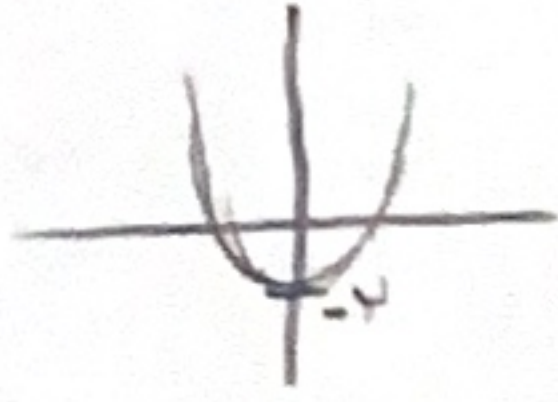
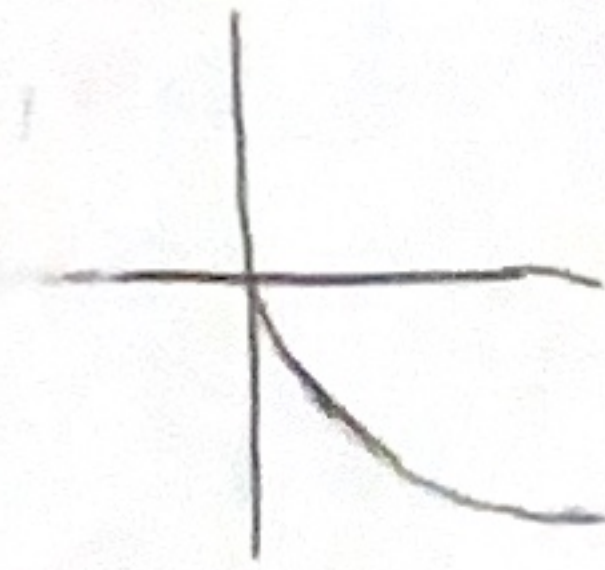
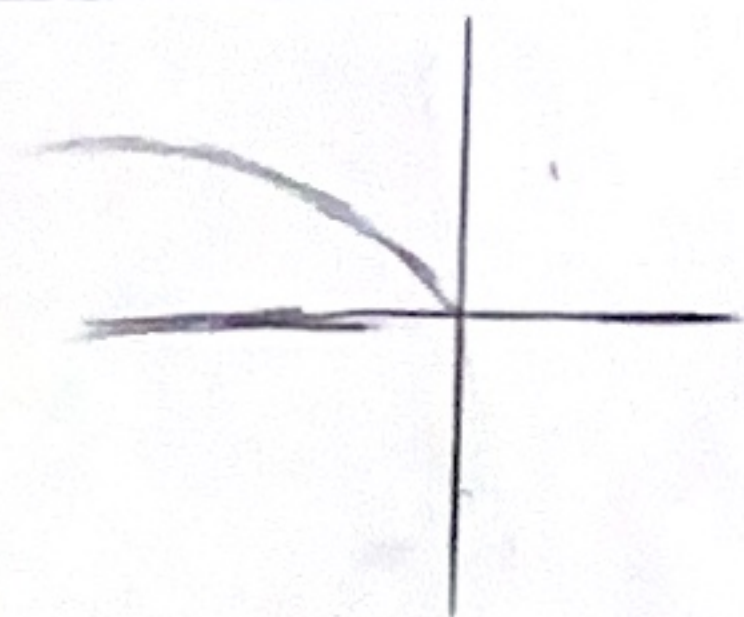
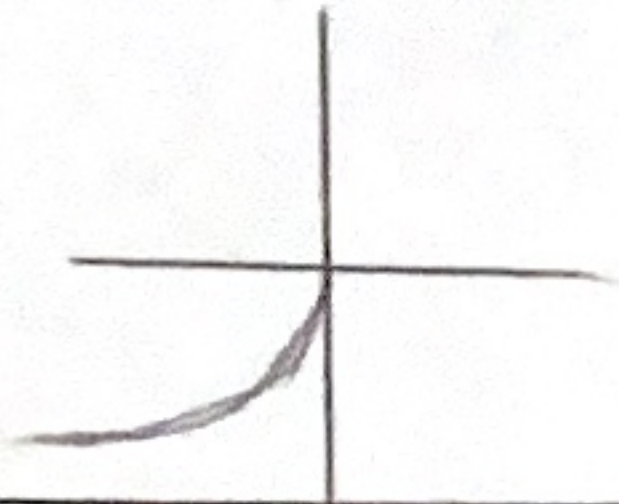
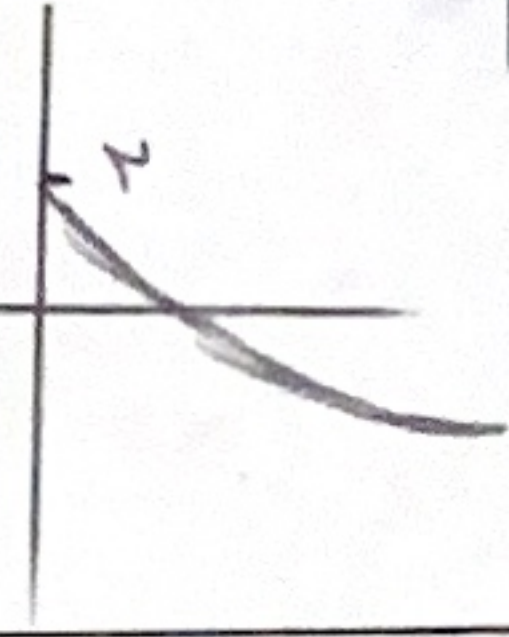
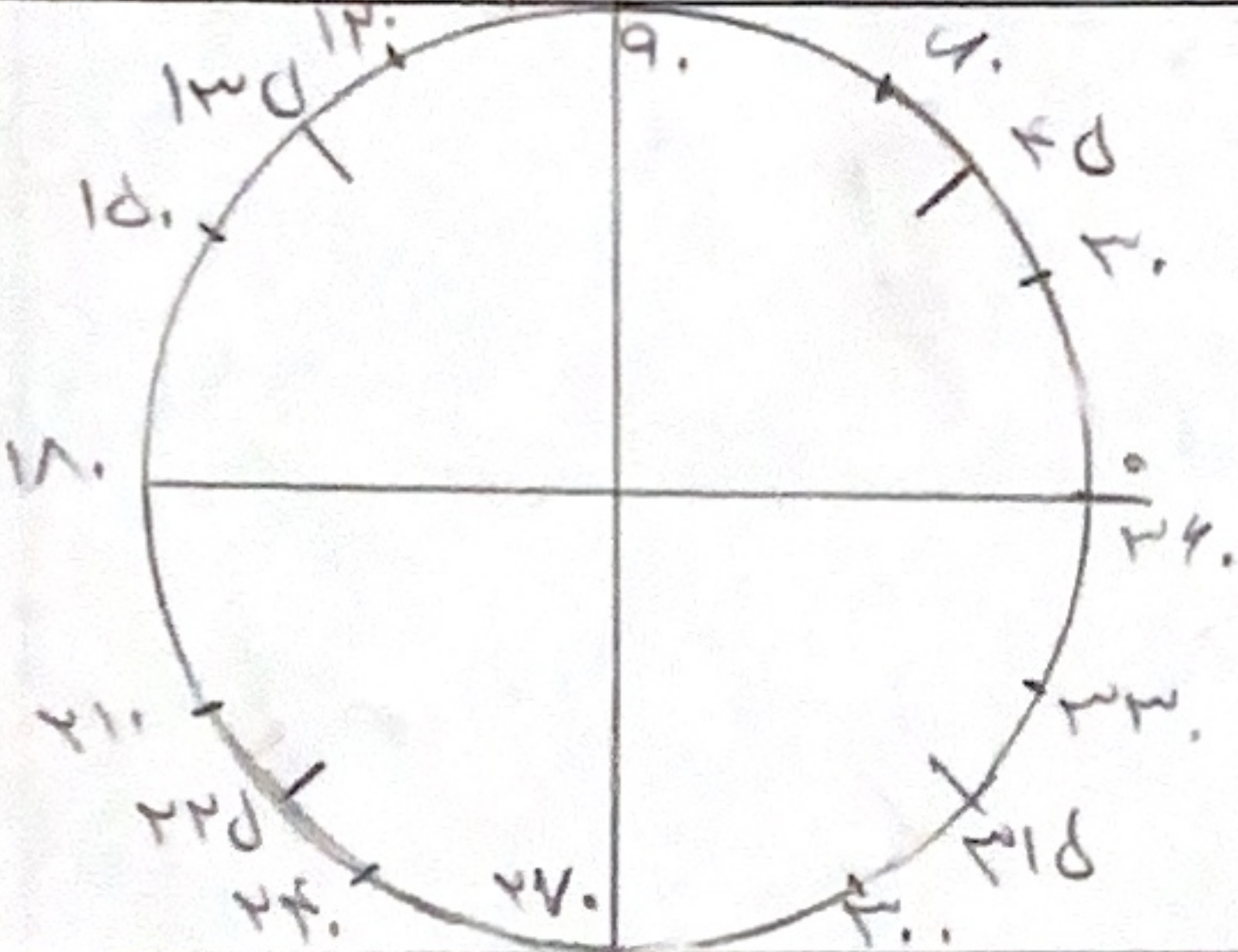
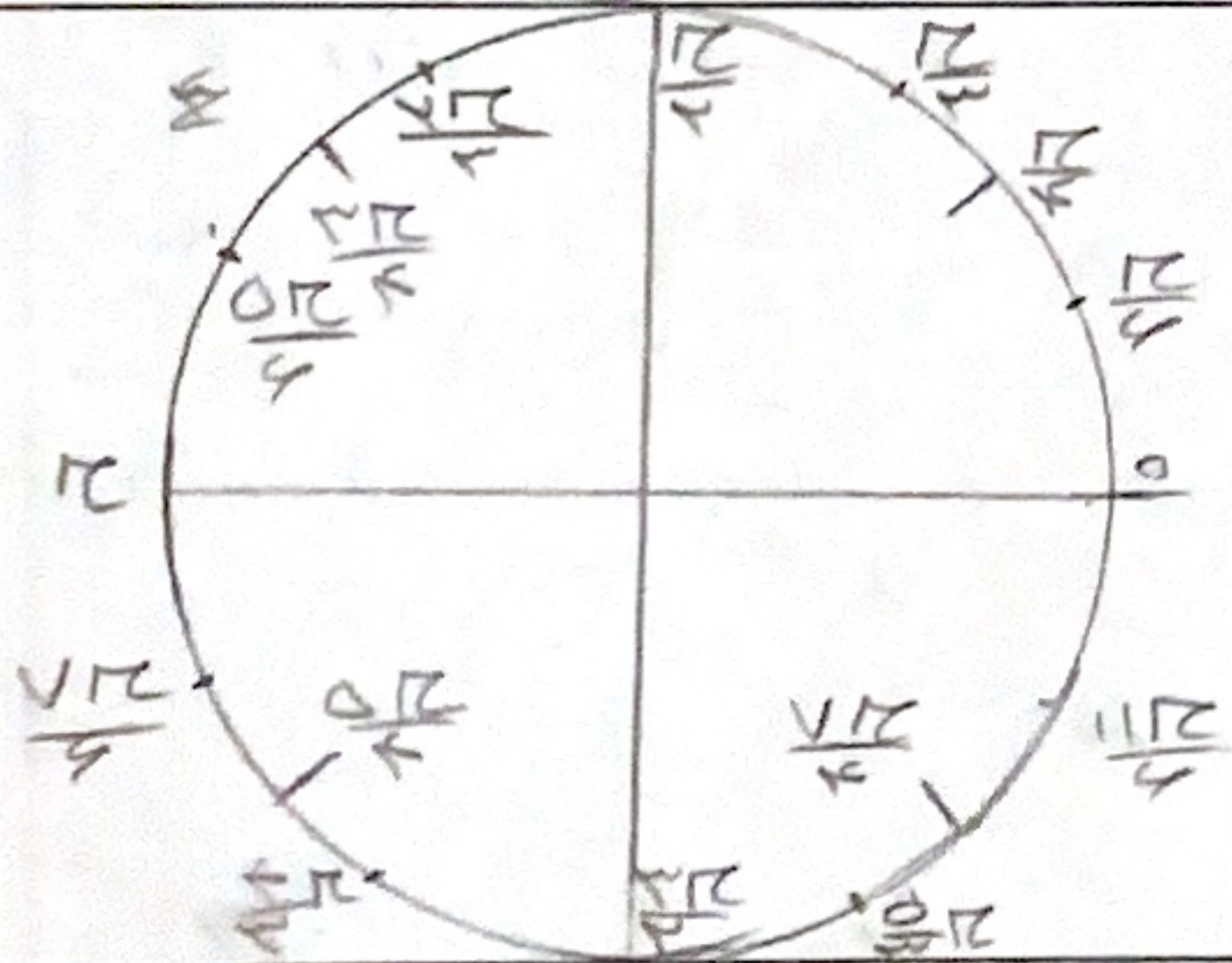
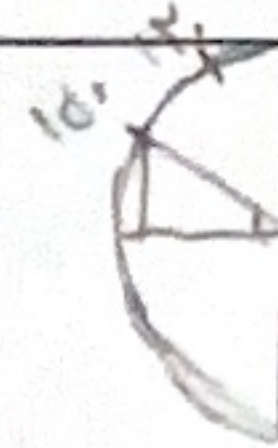
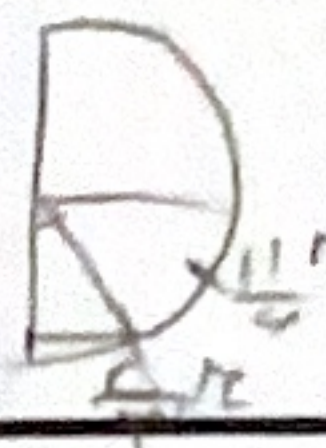
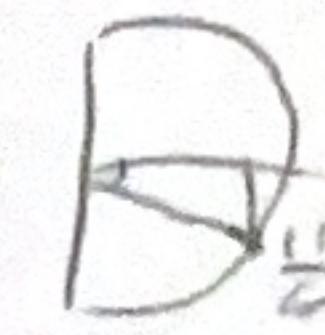


ب) $\sqrt[5]{x}$



د) $\frac{1}{x^4}$



٦	الف)  ب)  ج)  د) 
٧	الف)  ب)  ج)  د) 
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٩	
١٠	الف) $\cos 12^\circ \rightarrow$  $\Rightarrow \frac{1}{\cos 12^\circ}$ ب) $\sin 108^\circ \rightarrow$  $\Rightarrow \frac{1}{\sin 108^\circ}$ ج) $\cos \frac{5\pi}{12} \rightarrow$  $\Rightarrow \frac{1}{\cos \frac{5\pi}{12}}$ د) $\sin \frac{11\pi}{12} \rightarrow$  $\Rightarrow \frac{1}{\sin \frac{11\pi}{12}}$