

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

$$1a = a^2 + 3$$

$$a^2 + 3 - 1a = 0 \xrightarrow{+1} (a-2)^2 = 1 \rightarrow a-2 = 1 \rightarrow a = 3 \quad \text{تابع نیست}$$

$$a-2 = -1 \rightarrow a = -1 \quad \text{تابع است}$$

برای هر ۲ مقدار داریم $|y| = |x| \rightarrow y = x \vee x = -y$ (الف)



(ب) $|y| + \sqrt{x+1} = 0 \rightarrow |y| = 0 \rightarrow y = 0$

$\sqrt{x+1} = 0 \Rightarrow x = -1$

(ب) جفتان برابر فرده برتی به دو عبارت میفرستند

فقط نقطه (۰، ۰) را بدست می آوریم



این تابع است.

(الف) $|y-1| = \sqrt{x-2} \xrightarrow{x=0} |y-1| = \sqrt{-2}$ تابع نیست

(ب) $y^5 - y = \frac{x^2}{2} \xrightarrow{x=0} y^5 - y = 0 \rightarrow y(y^4 - 1) = 0 \rightarrow y = 0, y = 1, y = -1$ تابع نیست

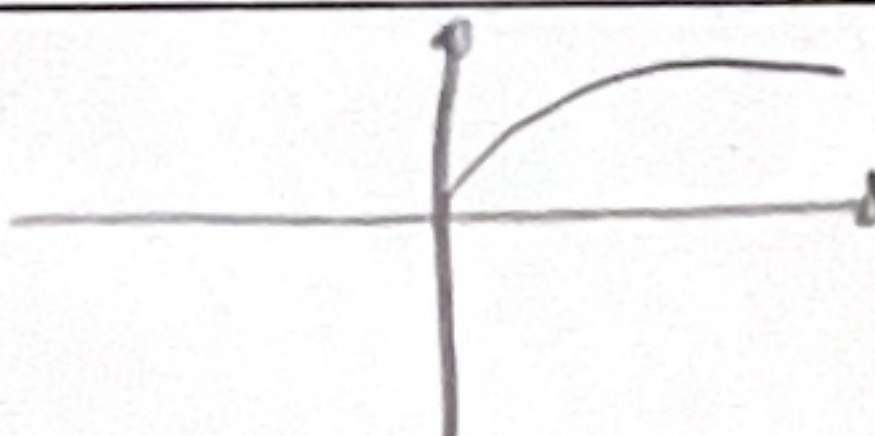
(ج) $\sin^2 x + \cos^2 \frac{y}{2} = 1 \xrightarrow{x=0} \sin^2 0 + \cos^2 \frac{y}{2} = 1 \rightarrow \cos^2 \frac{y}{2} = 1 \vee \cos \frac{y}{2} = 1$ تابع نیست

(د) $2xy = x \xrightarrow{x=0} 2x(0) \times y = 0$ تابع نیست

(الف) $x^2 + |y-1| = 1 \xrightarrow{x=0} |y-1| = 0 \rightarrow y-1 = 0 \rightarrow y = 1$ تابع است

(ب) $y^5 + 3x = 0 \xrightarrow{x=0} y^5 = 0 \Rightarrow y = 0$ تابع است

(الف) $y = \sqrt[4]{x}$



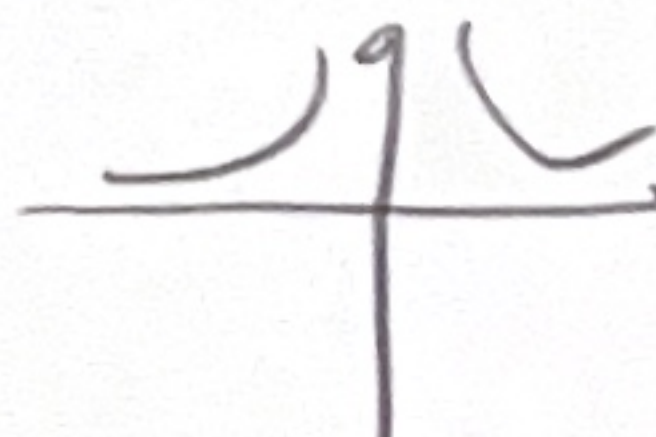
(ج) $y = \frac{1}{x^3}$

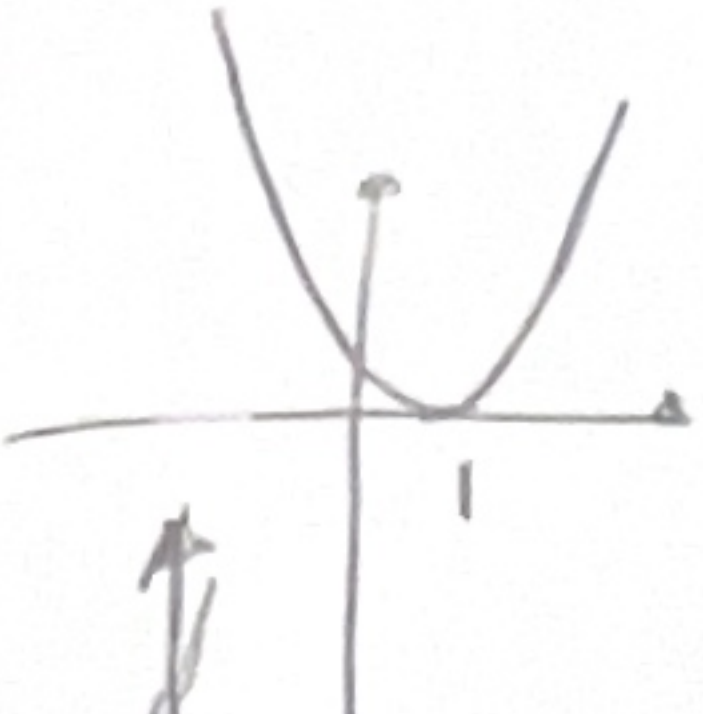
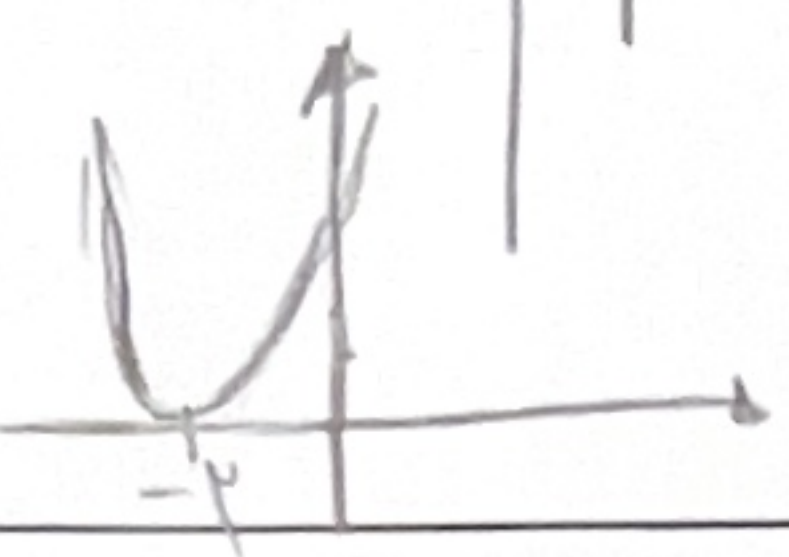
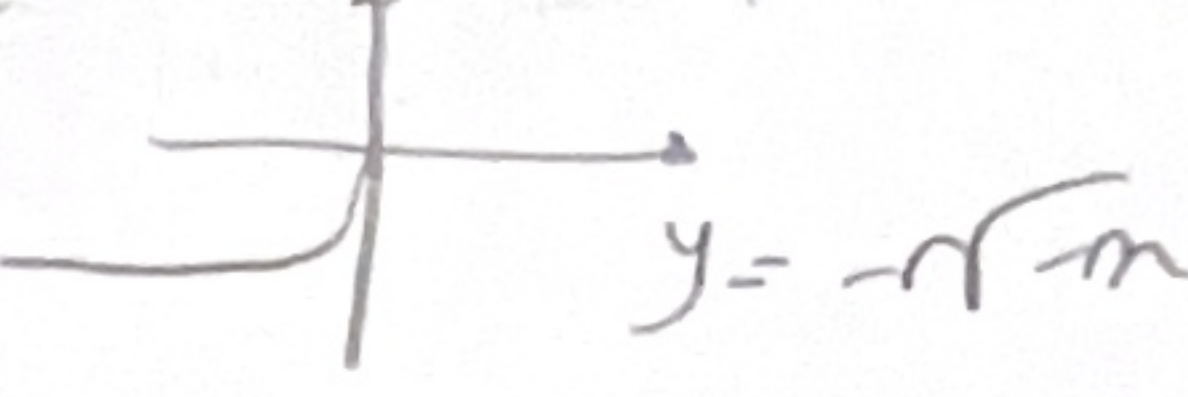
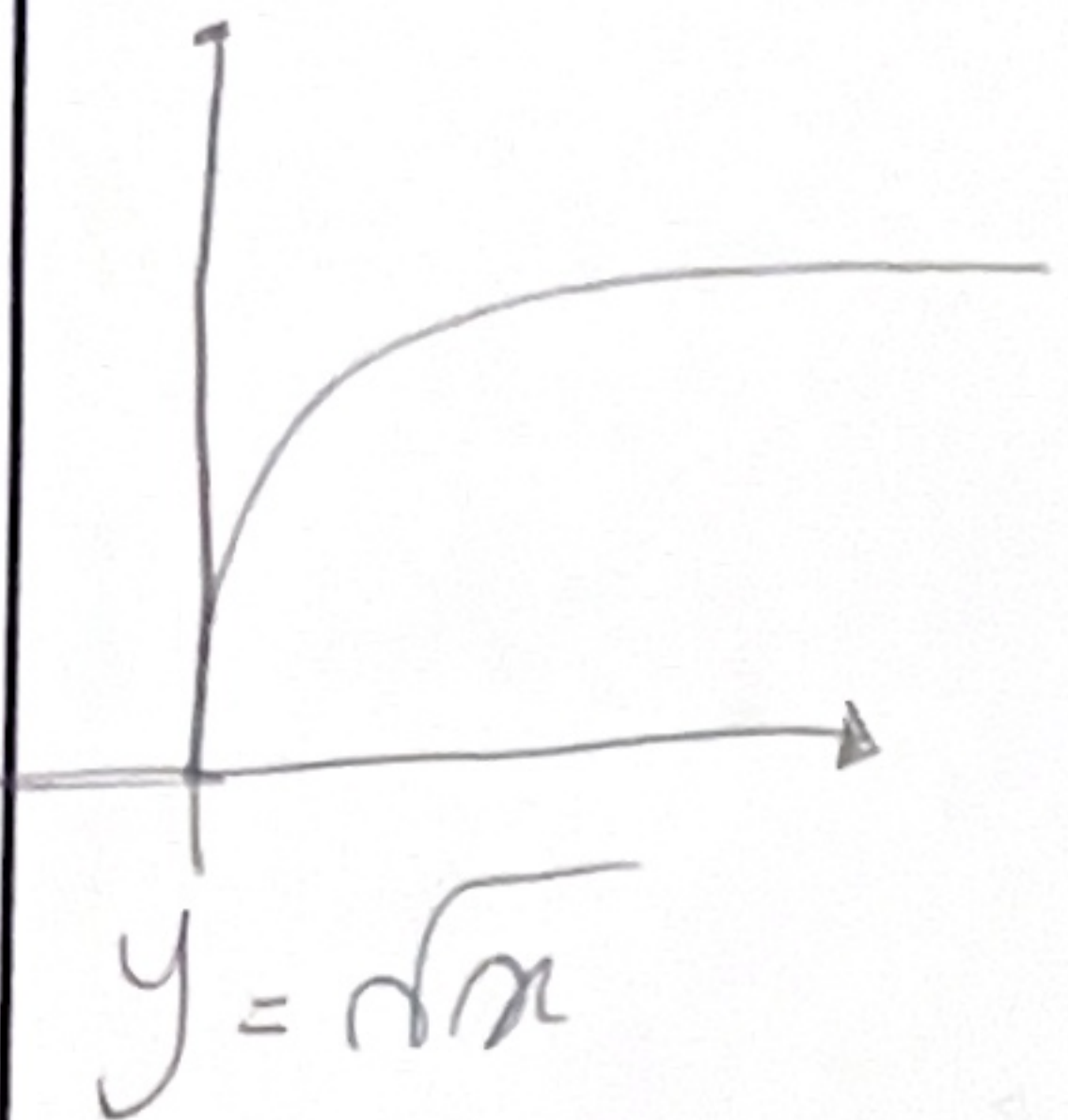
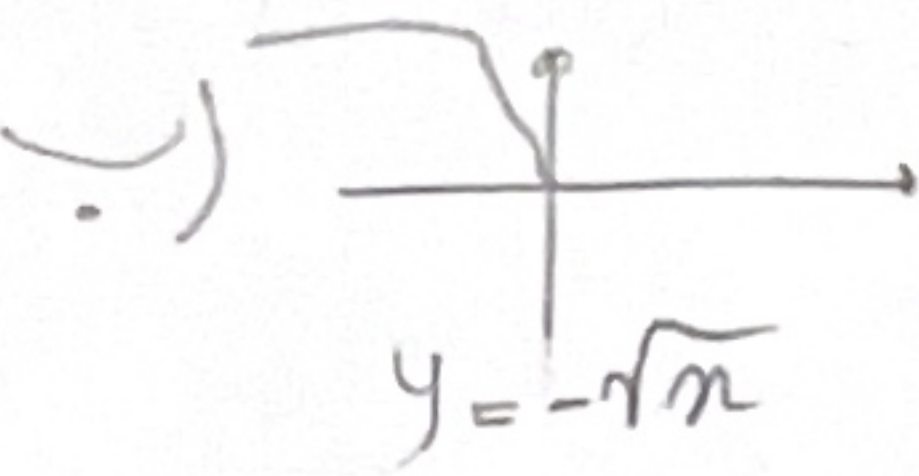
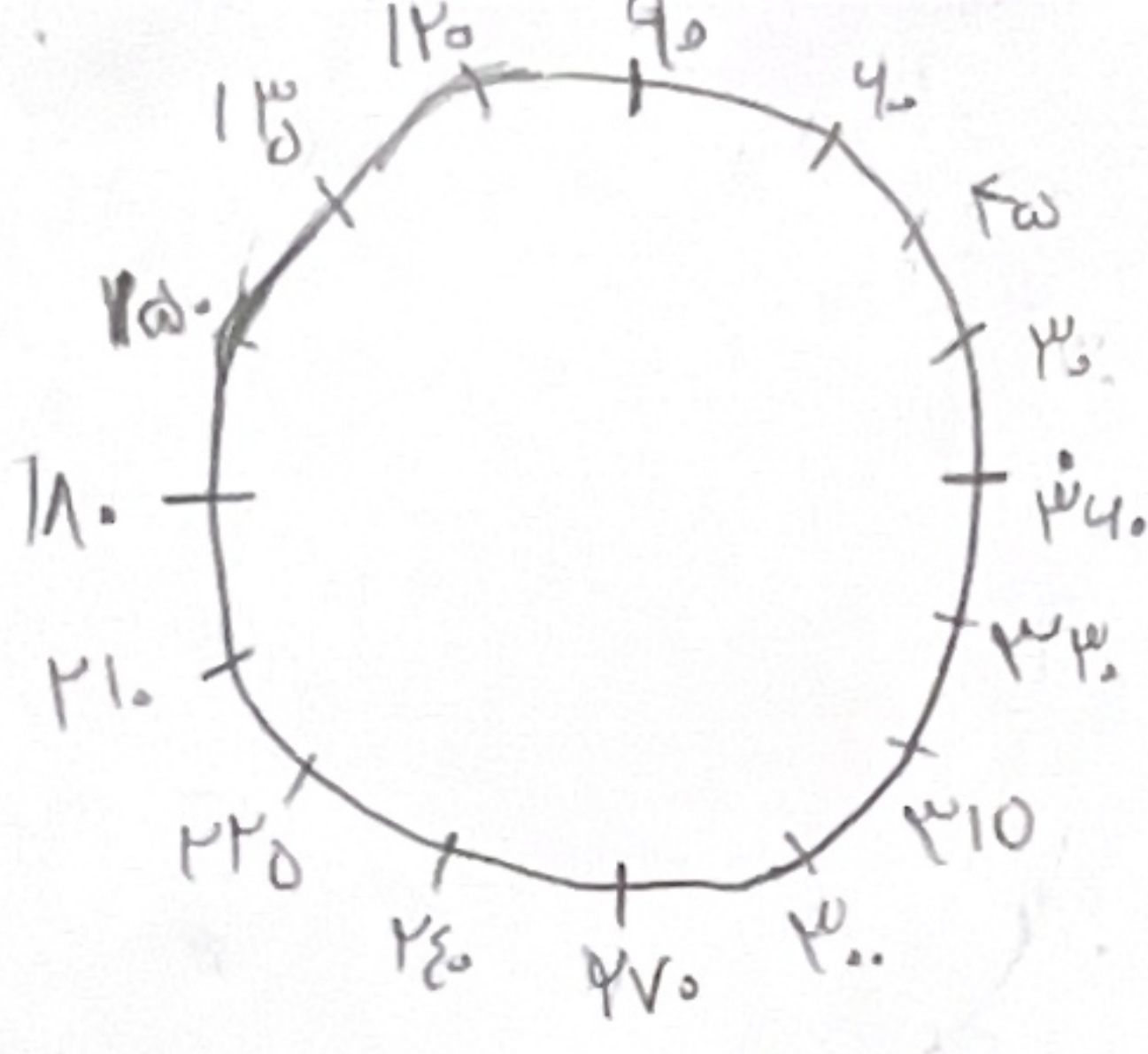
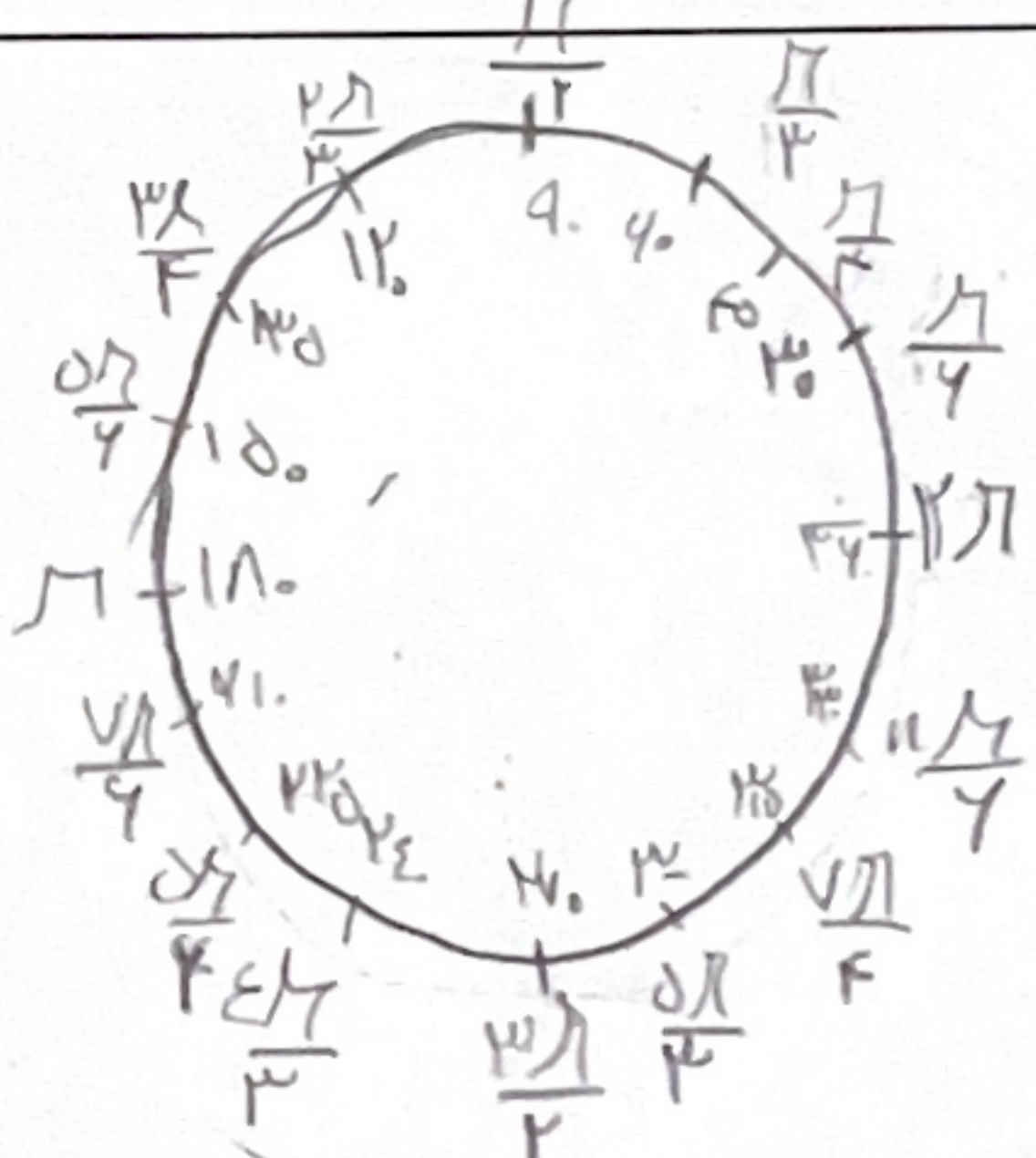


(ب) $y = \sqrt[5]{x}$



(د) $y = \frac{1}{x^2}$



$y = x^2$ 	$y = x^2 - 2$ 	٦
الف) $y = (x-1)^2$ 	ب) $y = x^2 + 1$ 	
ب) $y = (x+2)^2$ 	ج) $y = -\sqrt{x}$ 	٧
$y = \sqrt{x}$ 	ب) $y = -\sqrt{x}$ 	
		٨
		٩
ا) $\cos 114^\circ = -\frac{1}{2}$	ب) $\sin 150^\circ = \frac{1}{2}$	١٠
ج) $\cos \frac{5\pi}{3} = \frac{1}{2}$	د) $\sin \frac{11\pi}{4} = -\frac{1}{2}$	