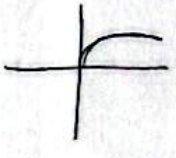
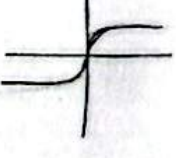
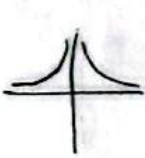
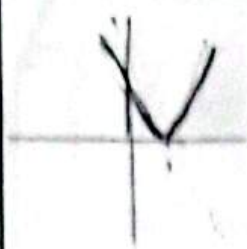
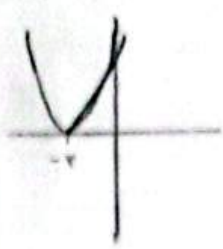
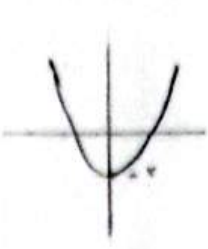
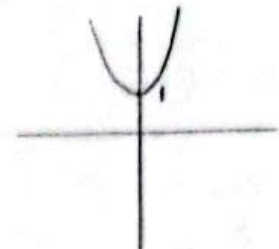
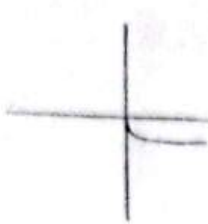
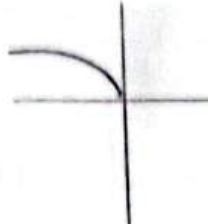
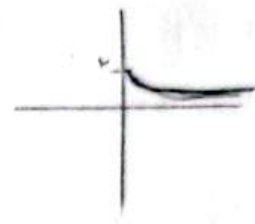
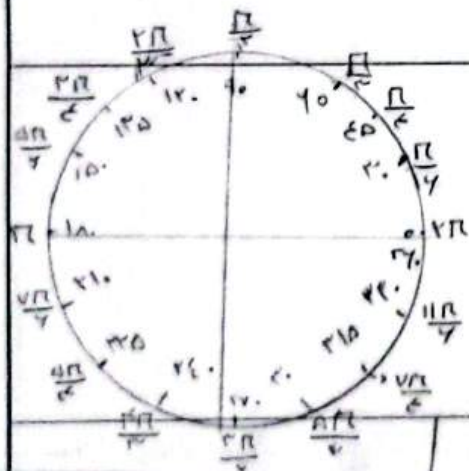
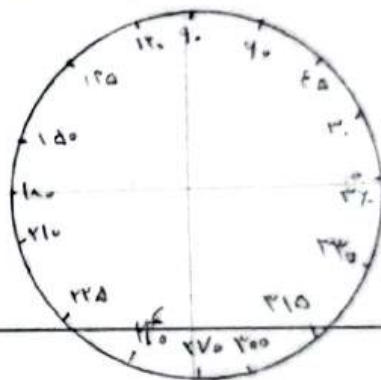


$f(a) = a^2 + 2a$ $0 \leq a^2 \leq f(a) + 2$ $0 = (a-1)(a+1)$ $a \geq 1$ $a \geq 1$	$(1, 12)$ $(1, 12)$	$f = \{(1, 12), (1, 12), (1, 12)\}$	۱	
الف) $y = x$ ب) $y + \sqrt{x+1} = 0 \quad (5, -1)$	$y = x \Rightarrow x = 2 \Rightarrow y = 2 \quad (2, -2)$ $y = -x \Rightarrow x = 2 \Rightarrow y = -2 \quad (-2, -2)$ 	در دو نقطه قطع می شود تابع نیست  تابع است.	۲	
الف) $y-1 = \sqrt{x-2} \Rightarrow x \geq 2 \Rightarrow y-1 = \sqrt{x-2}$ ب) $y^2 - y = \frac{x^2}{2} \Rightarrow x = 0 \Rightarrow \frac{0}{2} = 0 \Rightarrow y^2 - y = 0 \Rightarrow y(y-1) = 0 \Rightarrow y = 0, 1$ ج) $\sin^2 x + \cos^2 \frac{y}{2} = 1 \Rightarrow \sin^2(\frac{\pi}{2}) = 1 \Rightarrow 1 + \cos^2 \frac{y}{2} = 1 \Rightarrow \cos^2 \frac{y}{2} = 0 \Rightarrow \cos \frac{y}{2} = 0 \Rightarrow \frac{y}{2} = \frac{\pi}{2}, \frac{3\pi}{2} \Rightarrow y = \pi, 3\pi$ د) $2xy = x \Rightarrow x = 1 \Rightarrow 2y = 1 \Rightarrow y = \frac{1}{2}$	تابع نیست چون عدد منفی زیر رادیکال ندارد تابع نیست	تابع نیست تابع نیست تابع نیست تابع نیست	۳	
الف) $x^2 + y-1 = 4x \Rightarrow x \geq 0$ ب) $y^2 + 3x = 0$ ج) $x \geq 0 \Rightarrow y^2 = 0$	تابع نیست	تابع نیست	۴	
الف) $y = \sqrt[4]{x}$ 	ب) $y = \sqrt[4]{x}$ 	ج) $y = \frac{1}{x^2}$ 	د) $y = \frac{1}{x^4}$ 	۵

$1) y = (x-1)^2$ 	$2) y = (x+2)^2$ 	$3) y = x^2 - 2$ 	$4) y = x^2 + 1$ 	8
$1) y = \sqrt{x}$ 	$2) y = \sqrt{-x}$ 	$3) y = -\sqrt{x}$ 	$4) y = -\sqrt{-x}$ 	9
				9
				10
$1) \cos 135^\circ = -\frac{1}{\sqrt{2}}$				10
$2) \cos \frac{4\pi}{3} = -\frac{1}{2}$				
$1) \sin 135^\circ = \frac{1}{\sqrt{2}}$				10
$2) \sin \frac{11\pi}{6} = -\frac{1}{2}$				