

$$f = \left\{ (1, 3a) \text{ و } (1, a^2 + 3) \text{ و } (2, 2a) \right\}$$

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

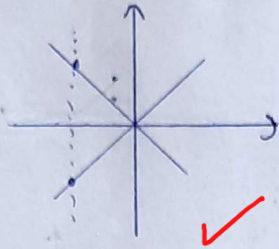
$$a^2 + 3 = 2a \quad a^2 - 2a + 3 = 0 \quad (a-3)(a-1) = 0 \quad \begin{cases} a-3=0 \Rightarrow a=3 \\ a-1=0 \Rightarrow a=1 \end{cases}$$

$a=1 \text{ و } 3$

$$|x| = |y| \quad \begin{cases} x=y \\ x=-y \end{cases}$$

تابع نیست

خط موازی محورهای مختصات
در ۲ نقطه قطع کرده

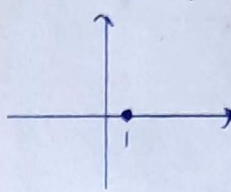


$$|y| = |n| \quad (\text{اف})$$

$$|y| + \sqrt{n-1} = 0 \quad |y| + \sqrt{n-1} = 0 \quad \begin{cases} |y|=0 \Rightarrow y=0 \\ \sqrt{n-1}=0 \Rightarrow n=1 \end{cases}$$

$(=) \Rightarrow \text{نقطه } (0, 1) \text{ نامنفرد}$

✓



تابع است

$$|y-1| = \sqrt{n-2}$$

$$n=3 \rightarrow |y-1|=1 \Rightarrow y = \begin{cases} 2 \\ 0 \end{cases}$$

تابع نیست

$$y^2 - y = \frac{n^2}{2} \quad n=0 \rightarrow y^2 - y = 0 \Rightarrow y = \begin{cases} 0 \\ 1 \end{cases}$$

تابع نیست

$$\sin^2 n + \cos^2 \frac{y}{r} = 1 \quad n=90^\circ \Rightarrow 1 + \cos^2 \frac{y}{r} = 1 \Rightarrow \cos^2 \frac{y}{r} = 0$$

$$\Rightarrow y = \begin{cases} 180^\circ \\ 270^\circ \end{cases}$$

تابع نیست

$$rny = rn \quad n=0 \rightarrow r \times 0 \times y = 0 \Rightarrow y \in \mathbb{R}$$

تابع نیست

$$n^2 + |y-1| = rn \quad |y-1| = rn - n^2 \quad (\text{اف})$$

$$n=3 \rightarrow |y-1| = 12-9 \quad |y-1| = 3 \Rightarrow y = \begin{cases} 4 \\ -2 \end{cases}$$

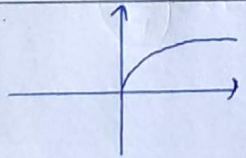
✓

تابع نیست

$$y^2 + 2n = 0 \quad n_1 = n_2 \quad y_1 = y_2 \Rightarrow y_1 = y_2$$

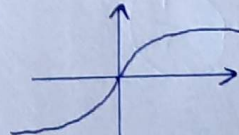
$$y_1^2 + 2n_1 = 0 \quad y_2^2 + 2n_2 = 0 \quad \begin{cases} n_1 = n_2 \\ y_1 = y_2 \end{cases} \Rightarrow y_1 = y_2$$

تابع است



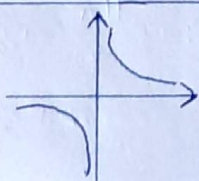
$$y = \sqrt{n} \quad (\text{اف})$$

✓



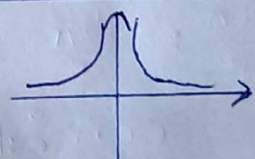
$$y = \sqrt{n} \quad (\text{ب})$$

✓



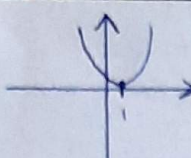
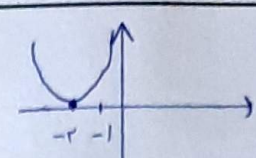
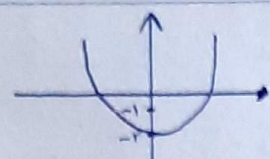
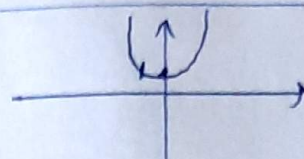
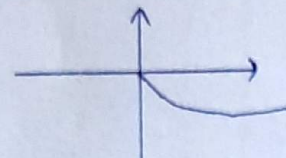
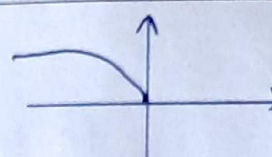
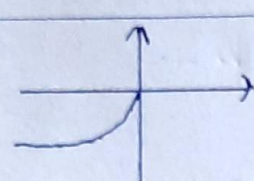
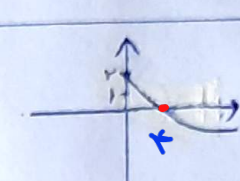
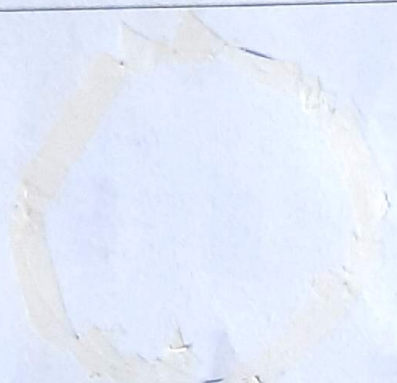
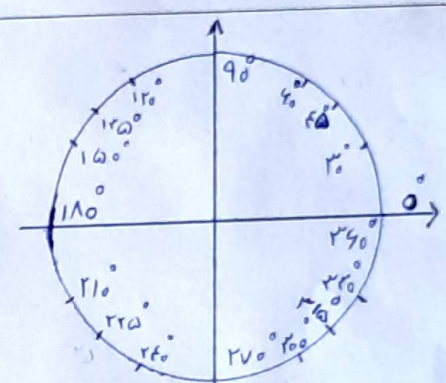
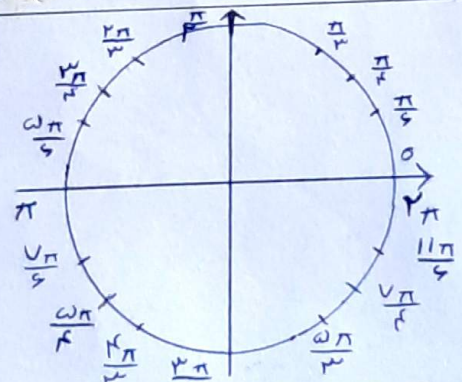
$$y = \frac{1}{n} \quad (\text{ع})$$

✓



$$y = \frac{1}{n^2} \quad (\text{د})$$

✓

 $y = (x-1)^2$ (الف) ✓	 $y = (x+1)^2$ (ب) ✓	6
 $y = x^2 - 2$ (ج) ✓	 $y = x^2 + 1$ (د) ✓	7
 $y = -\sqrt{x}$ (هـ) ✓	 $y = \sqrt{x}$ (و) ✓	8
 $y = -\sqrt{x+1}$ (ز) ✓	 $y = -\sqrt{x-1}$ (ح) ✓	9
		10
		11
$\cos 180^\circ = \left(-\frac{1}{r}\right)$ ✓	$\sin 180^\circ = \left(\frac{1}{r}\right)$ ✓	12
$\cos \frac{11\pi}{9} : \frac{11\pi}{9} = 270^\circ$ $\cos 270^\circ = \left(\frac{1}{r}\right)$ ✓	$\sin \frac{11\pi}{9} : \frac{11\pi}{9} = 270^\circ$ $\sin 270^\circ = \left(-\frac{1}{r}\right)$ ✓	13