

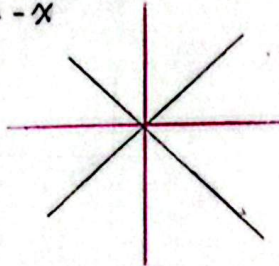
$$1^x = a^2 + 3 \rightarrow a^2 - 1^x + 3 = 0 \quad \begin{cases} a = 1 \\ a = 3 \end{cases}$$

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الف) $y = x$ یا $y = -x$

تابع است

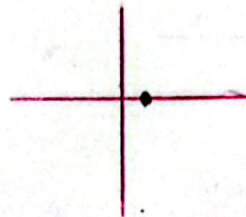


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ب) $\sqrt{x-1}$, $x > 0$ یا $x < 0$

$y = 0$, $x = 1$

فقط در صفر درست است



تابع است

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الف) $x = 3 \rightarrow |y-1| = \sqrt{1} \rightarrow |y-1| = 1 \rightarrow y-1 = \pm 1 \rightarrow \begin{cases} y = 2 \\ y = 0 \end{cases}$

تابع نیست

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ب) $x = 0 \rightarrow y(y^4 - 1) = 0 \rightarrow \begin{cases} y = 0 \\ y^4 - 1 = 0 \rightarrow y = 1 \end{cases}$ تابع نیست

ج) $x = 0 \rightarrow 0 + \cos^2 \frac{y}{2} = 1 \rightarrow \cos^2 \frac{y}{2} = 1 \rightarrow \cos \frac{y}{2} = \pm 1$ تابع نیست

د) $x = 0 \rightarrow y = \infty$ تابع نیست

الف) $x = 1 \rightarrow 1 + |y-1| = 4 \rightarrow |y-1| = 3 \rightarrow y-1 = \pm 3 \rightarrow \begin{cases} y = 4 \\ y = -2 \end{cases}$

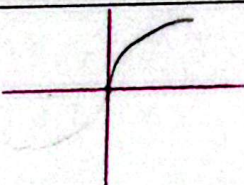
تابع نیست

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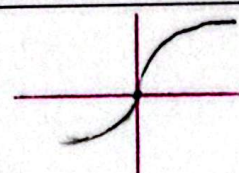
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ب) $\begin{cases} (x_1, y_1) \in f \\ (x_2, y_2) \in f \end{cases} \rightarrow \text{if } x_1 = x_2 \text{ then } y_1 = y_2 \rightarrow y_1 = y_2 \rightarrow y = y$ تابع است

الف)

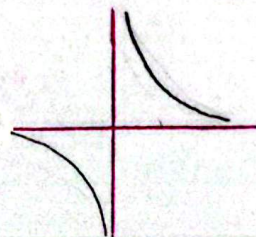


ب)

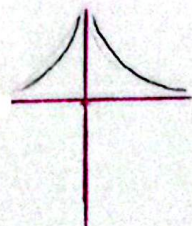


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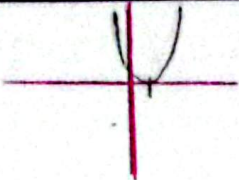
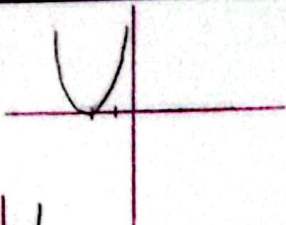
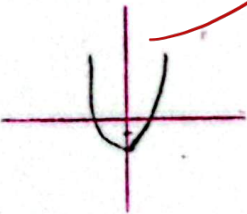
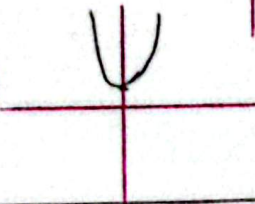
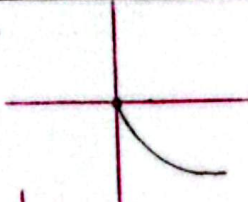
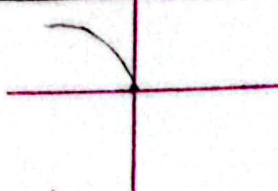
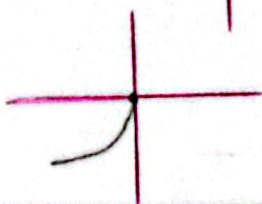
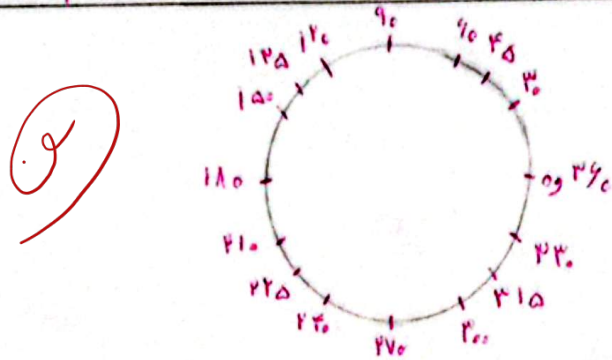
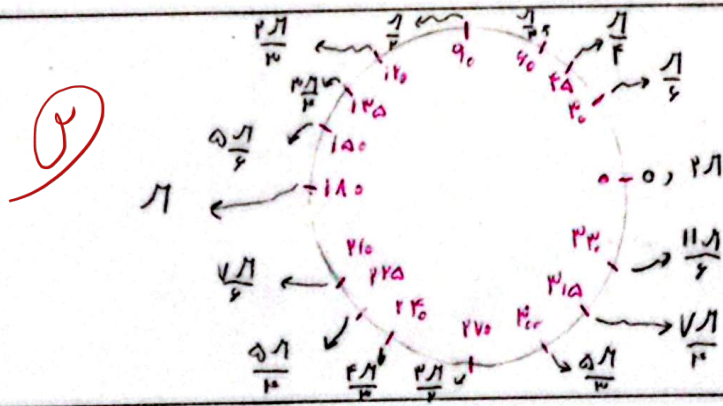
ج)



د)



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الف) 	ب) 	6
ج) 	د) 	
الف) $y = \sqrt{x} \rightarrow$ 	ب) 	7
ج) 	د) 	
		8
		9
الف) $-\frac{1}{p}$	ب) $\frac{1}{p}$	
ج) $\frac{1}{p}$	د) $-\frac{1}{p}$	10