

$$a^2 + 3 = 4a$$

$$a^2 - 4a + 3 = 0$$

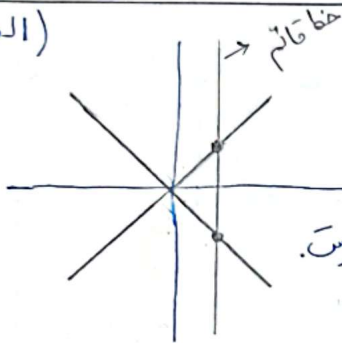
دو عضو اول برابرند و عضو سوم متفاوت است و شکلی ندارد (دو عضو)

$a = 1$ و $3 \Rightarrow$

$$a = 1 \text{ و } 3$$

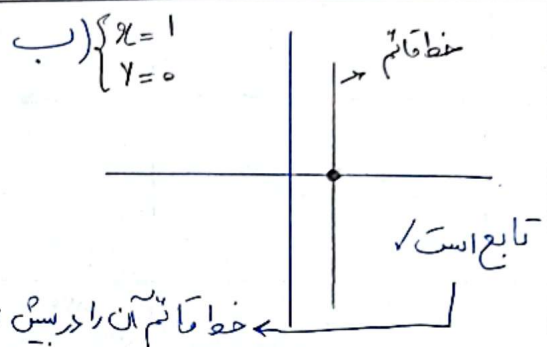
۱

(الف)



چون خط قائم آن را در بیش از یک نقطه قطع می کند. تابع نیست.

$$\begin{cases} x=1 \\ y=0 \end{cases}$$



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(الف) $x=6 \Rightarrow |y-1|=2 \Rightarrow y_1, y_2 = 3 \text{ و } -1$

(ب) $x=0 \Rightarrow y^5=y \Rightarrow y_1, y_2 = 1 \text{ و } -1$

(ج) $x=90 \Rightarrow \sin^2 x = 1 \Rightarrow \cos^2 \frac{y}{2} = 0 \Rightarrow \frac{y}{2} = 90 \text{ و } 270 \Rightarrow y_1, y_2 = 180 \text{ و } 540$

(د) $2xy = x \Rightarrow x=0 \Rightarrow y=1R \Rightarrow \text{مثال: } y=1, \sqrt{2}, 4, \dots$

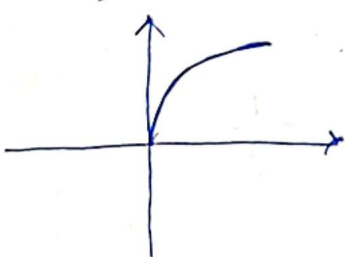
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(الف) $x=1 \Rightarrow |y-1|=4-1=3 \Rightarrow y_{1,2} = 4 \text{ و } -2$ تابع نیست. X

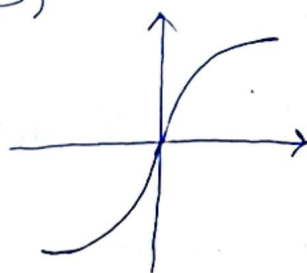
(ب) $\begin{cases} y_1^5 + 3x_1 = 0 \\ y_2^5 + 3x_2 = 0 \end{cases} \xrightarrow{x_1=x_2} y_1^5 = y_2^5 \Rightarrow y_1 = y_2 \quad \checkmark$ تابع است.

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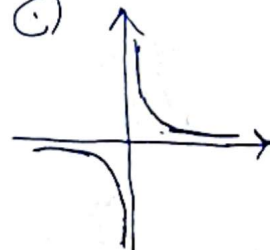
(الف)



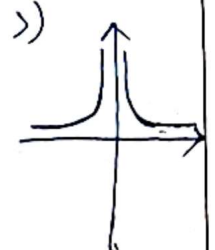
(ب)



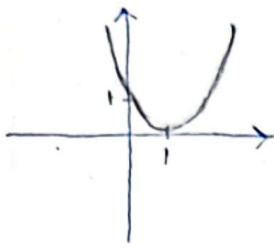
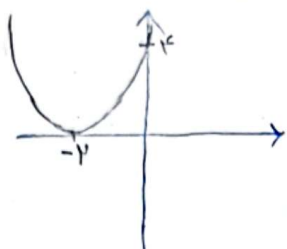
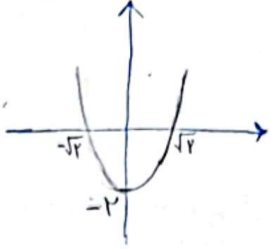
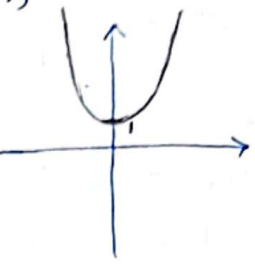
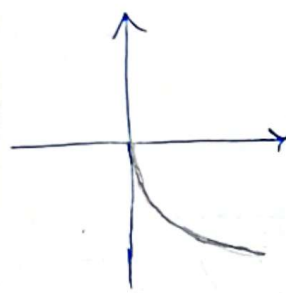
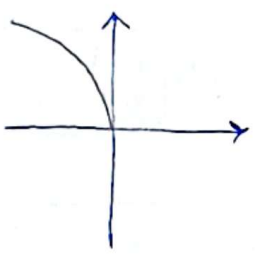
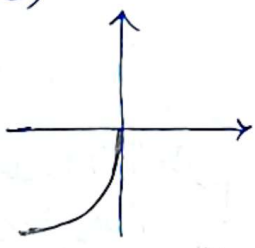
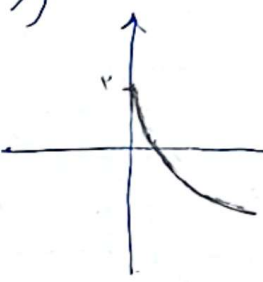
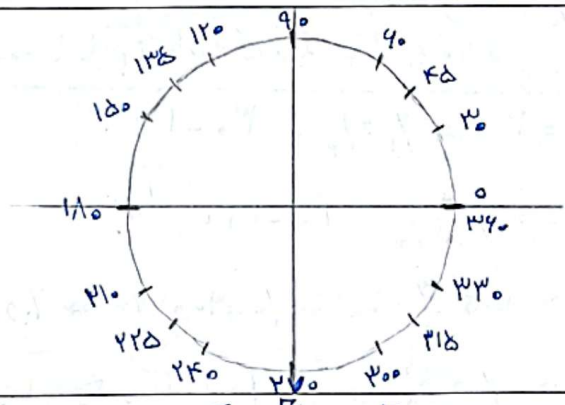
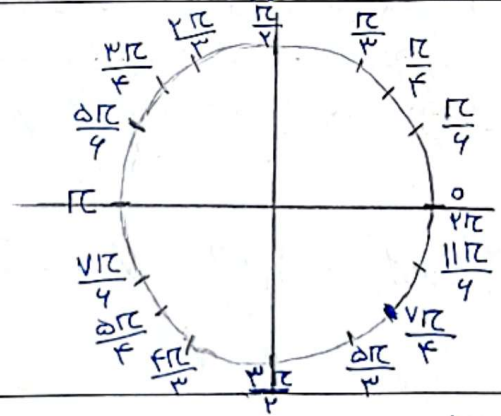
(ج)



(د)



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الف)  ب)  ج)  د) 	٦
الف)  ب)  ج)  د) 	٧
	٨
	٩
الف) $-\frac{1}{2}$ ب) $\frac{1}{2}$ ج) $\cos 300^\circ = \frac{1}{2}$ د) $\sin 210^\circ = -\frac{1}{2}$	١٠