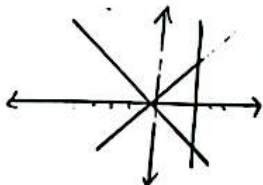
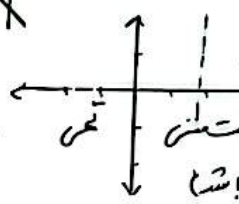


الف) $f = \{(1, 3a), (1, a^2 + 3), (2, 3a)\}$ تابع $3a = a^2 + 3 \rightarrow a^2 - 3a + 3 = 0 \Rightarrow a + b + c = 0$
 $a = 1, a = c, a = 3$

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الف) $|y| = |x| \rightarrow$  تابع معادلات آن را ورزید نتایج بنویسند
 ب) $|y| + \sqrt{x-1} = 0 \rightarrow |y| = -\sqrt{x-1} \rightarrow$  تابع معادلات آن را ورزید نتایج بنویسند
 از برادینا سبب ریخت آن علامت منس
 قدر مطلق یک عدد منس تواند منس باشد

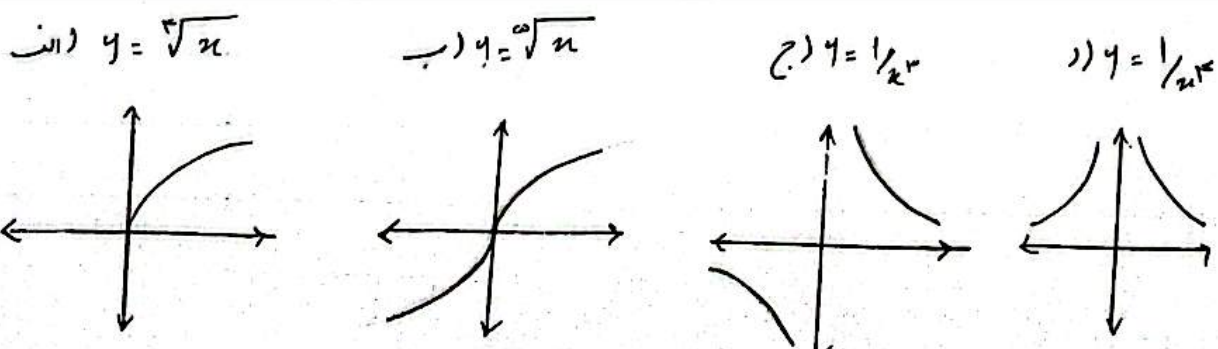
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الف) $|y-1| = \sqrt{x-2} \xrightarrow{x=3} |y-1| = \sqrt{3-2} \rightarrow |y-1| = 1 \Rightarrow y-1=1 \rightarrow y=2$ تابع نیست
 $y-1=-1 \rightarrow y=0$
 ب) $y^3 - y = x^2 \xrightarrow{x=0} y^3 - y = 0 \rightarrow y(y^2 - 1) = 0 \rightarrow y=0, y=1, y=-1$ تابع نیست
 ج) $\sin^2 x + \cos^2 y = 1 \xrightarrow{x=\pi/2} 1 + \cos^2 y = 1 \rightarrow \cos^2 y = 0 \rightarrow y = \pi, y = 2\pi$ تابع نیست
 د) $2xy = x \xrightarrow{x=0} 0 = 0 \rightarrow$ مرتبای از y پاسخگوست.

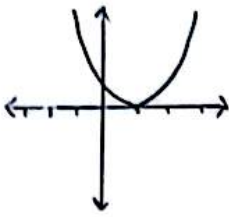
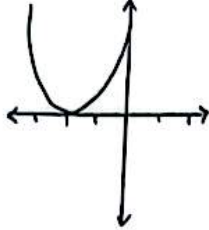
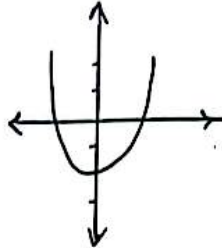
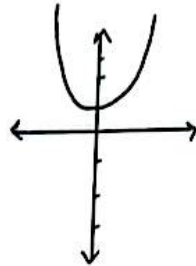
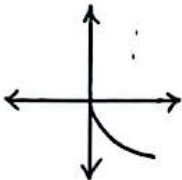
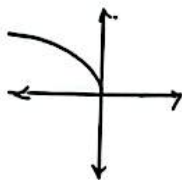
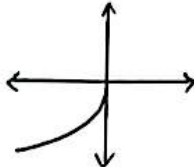
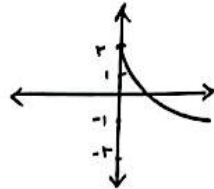
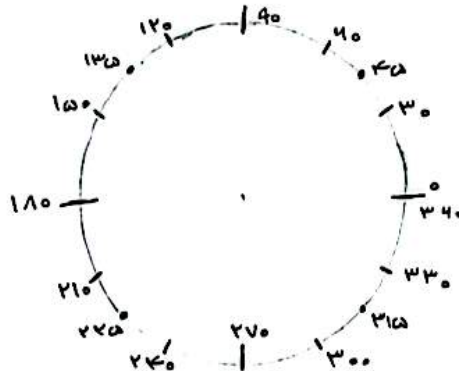
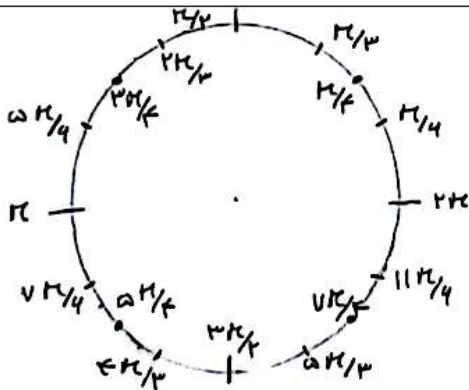
۳

الف) $x^2 + |y-1| = 4x \xrightarrow{\text{مثال نقض}} x=2 \rightarrow 4 + |y-1| = 8 \rightarrow |y-1| = 4 \rightarrow y = -3$ تابع نیست
 $y = 5$
 ب) $y^3 + 3x = 0 \xrightarrow{\text{تجزیه}} \begin{cases} y_1^3 + 3x_1 = 0 \\ y_2^3 + 3x_2 = 0 \end{cases} \xrightarrow{x_1=x_2, y_1=y_2} y_1 = y_2$ تابع هست

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الف) $y = (x-1)^2$ 	ب) $y = (x+2)^2$ 	ج) $y = x^2 - 2$ 	د) $y = x^2 + 1$ 	٤
الف) $y = -\sqrt{x}$ 	ب) $y = \sqrt{-x}$ 	ج) $y = -\sqrt{-x}$ 	د) $y = -\sqrt{x} + 2$ 	٧
				٨
				٩
الف) $\cos 120^\circ = -1/2$	ج) $\cos 5\pi/6 \rightarrow \cos 150^\circ = -\sqrt{3}/2$			١٠
ب) $\sin 60^\circ = 1/2$	د) $\sin 11\pi/4 = -1/2$			