

$$f = \{ (1, 4a), (1, a^2 + 3), (2, 3a) \} \xrightarrow{\text{تابع}} f = \{ (1, 12), (1, 9) \}$$

نیست

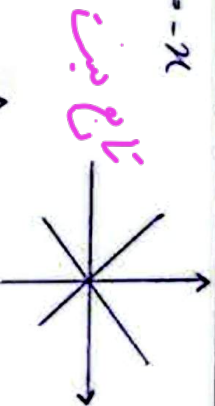
$$4a = a^2 + 3$$

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

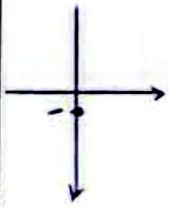
$$(a-1)(a-3) = 0 \Rightarrow a=1, a=3$$

(1)

الف $-x = y \rightarrow |x| = |y|$



ب $y = 0 \rightarrow y = 0$



تابع نیست

الف $x = 3 \rightarrow y = 1 \rightarrow y = -1 \rightarrow y = 0$

ب $x = 0 \rightarrow y = (y^2 - 1) = 0 \rightarrow y = 1, y = -1$

در بالای یک خط عمودی

ج $x = \frac{\pi}{2} \rightarrow 1 + \frac{\cos y}{2} = 1 \rightarrow \cos y = 0 \rightarrow y = \frac{\pi}{2}, \frac{3\pi}{2}$

د $x = 0 \rightarrow y = 0 \rightarrow y = 0$ برای همه اعداد درست است.

الف $\begin{cases} x_1^2 + 3x_1 = 0 \\ y_1^2 + 3y_1 = 0 \end{cases} \xrightarrow{x_1 = x_2} y_1 = y_2$

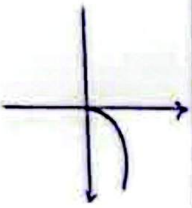
تابع

ب $x_1^2 + |y_1 - 1| = 4x_1$

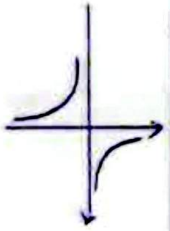
$x_1 = x_2 \Rightarrow y_1 = y_2$

(2)

الف

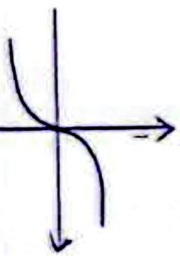


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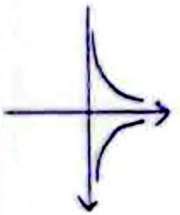
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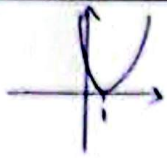
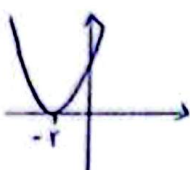
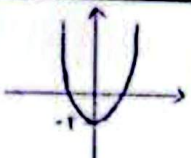
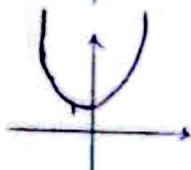
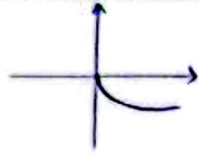
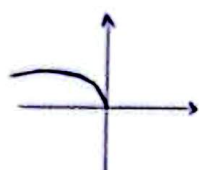
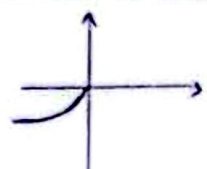
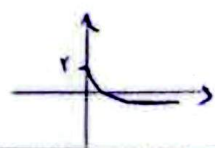
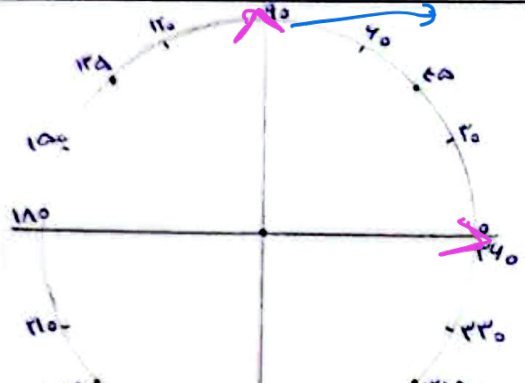
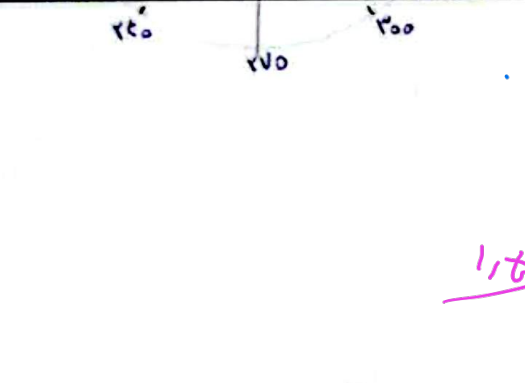
ب



(3)

د



الف)  ب) 	ج)  د) 	٦
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	حتماً رسم شود. <u>١١٧٥</u>	٨
	حتماً رسم شود. <u>١١٥</u>	٩
الف) $-\frac{1}{2}$ ب) $\frac{1}{2}$	ج) $\frac{1}{2}$ د) $-\frac{1}{2}$	١٠