

$$\left. \begin{array}{l} y_1^2 = 2x_1^2 - 1 \\ y_2^2 = 2x_2^2 - 1 \end{array} \right\} x_1 = x_2 = x^2 \rightarrow \left\{ \begin{array}{l} y_1^2 = y_2^2 \rightarrow y_1 = y_2 \end{array} \right. \text{تابع}$$

$$\left. \begin{array}{l} y_1^2 + y_2 = 2x_1^2 - 1 \\ y_2^2 + y_1 = 2x_2^2 - 1 \end{array} \right\} x_1 = x_2 \rightarrow y_1^2 + y_1 = y_2^2 + y_2 \rightarrow \frac{(y_1 - y_2)(y_1^2 + y_1 + y_2 + y_2^2 + 1)}{y_1 - y_2} = 0$$

داده منفی هوزر برقرارند

الف) $\left. \begin{array}{l} y_1 = x_1^2 - 1 \\ y_2 = x_2^2 - 1 \end{array} \right\} x_1 = x_2 \rightarrow y_1 = y_2$ تابع

ب) $x = 0 \rightarrow |y| = 1 \rightarrow y = \pm 1$ تابع

ج) $\left. \begin{array}{l} y_1^2 + x_1^2 - 2x_1 + 1 = 0 \\ y_2^2 + x_2^2 - 2x_2 + 1 = 0 \end{array} \right\} x_1 = x_2 \rightarrow y_1^2 = y_2^2 \rightarrow y_1 = y_2$ تابع

د) $\left. \begin{array}{l} \sqrt[3]{y_1} + \sqrt[3]{x_1} = 1 \\ \sqrt[3]{y_2} + \sqrt[3]{x_2} = 1 \end{array} \right\} x_1 = x_2 \rightarrow \sqrt[3]{y_1} = \sqrt[3]{y_2} \rightarrow y_1 = y_2$ تابع

الف) $\left(\frac{\sqrt{2}}{\frac{1}{2}} \right) \cdot \frac{2\sqrt{2}}{2} = \sqrt{2}$

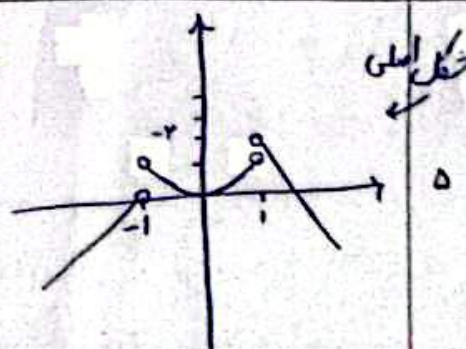
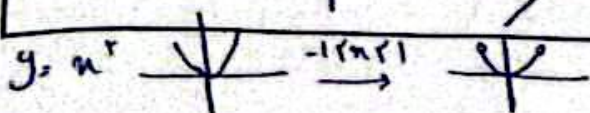
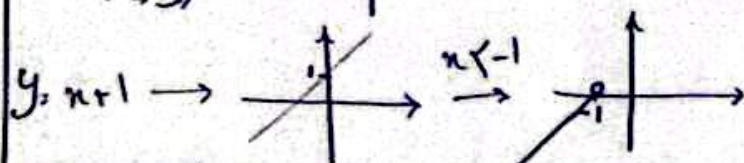
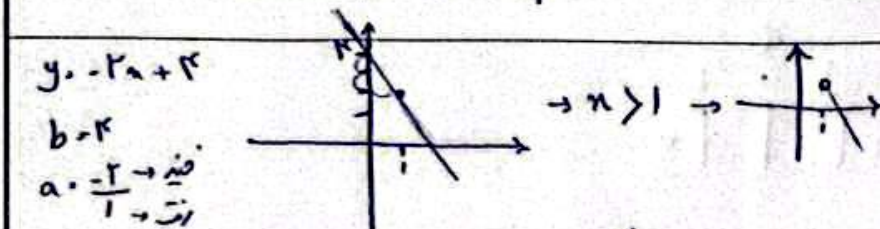
ب) $\left(\frac{\sqrt{2}}{\frac{1}{2}} \right) = \frac{\sqrt{2}}{\frac{1}{2}} = \sqrt{2}$

ج) $\left(\frac{-\frac{1}{2}}{\frac{\sqrt{2}}{2}} \right) = \frac{-\frac{1}{2}}{\frac{\sqrt{2}}{2}} = -\frac{1}{\sqrt{2}}$

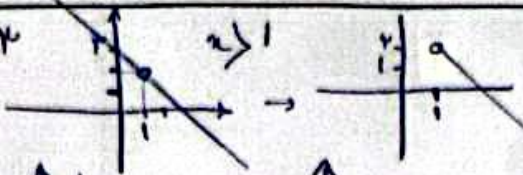
د) $\frac{-1}{0}$ تعریف نشده

الف) $a = 3 \rightarrow \frac{\pi}{4}$
 $a = 15 \rightarrow \frac{5\pi}{4}$

ب) $a = 45 \rightarrow \frac{3\pi}{4}$
 $a = 315 \rightarrow \frac{7\pi}{4}$

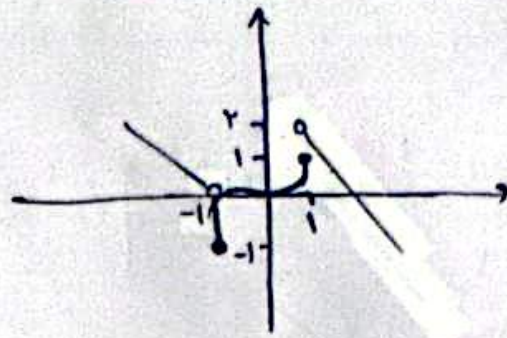
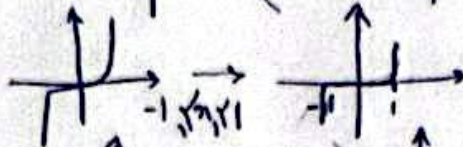


$$y = -x + 2$$

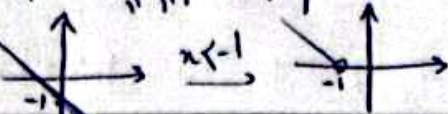


شکل اول

$$x^2 =$$



$$-x - 1 =$$



الف)

$$y = (x^2 - 1)(x^2 - 4)(x^2 - 9)$$

x	1	2	3	4
	-	+	-	+

ب)

$$y = (x-2)(x-3)^2(x-4)$$

x	2	3	4
	+	-	-
			+

$$y = \frac{(x-2)(x-4)}{x-3}$$

x	2	3	4
	-	+	-
			+

$$y = \frac{(x-2)(x-4)}{(x-3)^2}$$

x	2	3	4
	+	-	-
			+

$$y = \frac{(x-1)^2(x+2)}{x-3}$$

(صورت کد بر $x-1$ بخشیدیم)

x	-2	1	3
	+	-	-
			+

$$y = \frac{(x-1)(x-2)}{(x-1)(x-4)}$$

x	1	2	3
	+	+	-
			+

$$y = \frac{x^2(x-1)}{x^2-1}$$

x	-1	0	1
	+	-	-
			+

دلیله صدر میخیزد
منفی (ارزش ندارد)
به ازای تمام مقادیر عدد مثبت می شود
و منفی میماند و منفی نمی شود.