

تجزیه یابی: $y^3 - x = 2x^2$ (الف)
 $y^3 = 2x^2 + x$
 $y^3 = 2x^2 + x$ } $y_1 = y_2 = y_3 = \sqrt[3]{2x^2 + x}$ ✓
 بهر صورت

مسئله تقصیر: $|y| + x^2 = x + 3$ $x=0 \rightarrow |y| = 3 \Rightarrow y = \pm 3$ ✗

تنها نقطه: $\sqrt{x-4} + |y-2| = 0 \Rightarrow \begin{cases} x=4 \\ y=2 \end{cases}$ در این تابع بر این دو نقطه تمرکز دارد
 مساله تقصیر: $x = \cos y \Rightarrow 0$ $\cos y$ مساوی صفر می شود $\frac{\pi}{2}$ و $\frac{3\pi}{2}$

(الف) $y = \frac{x+4}{x^2-4x} \rightarrow x(x-4)$ $D_f = \mathbb{R} - \{0, 4\}$

(ب) $y = \frac{x+4}{2x^2-7x+19} \rightarrow x^2-7x+19 \neq 0$ $\Rightarrow D_f = \mathbb{R}$
 بهر صورت برقرار است

(ج) $y = \frac{x+4}{x^2+x+4} \rightarrow x^2+x+4 \neq 0$ $\Rightarrow D_f = \mathbb{R}$ (✓) (✓)

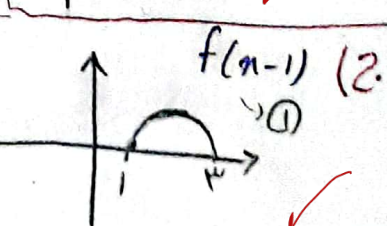
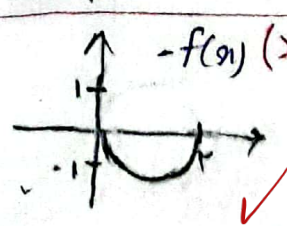
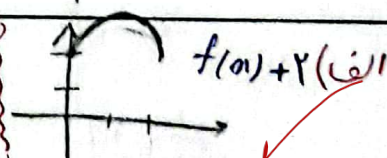
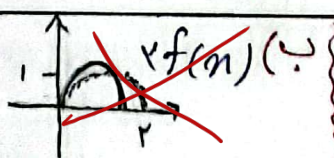
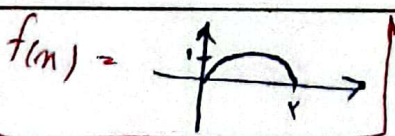
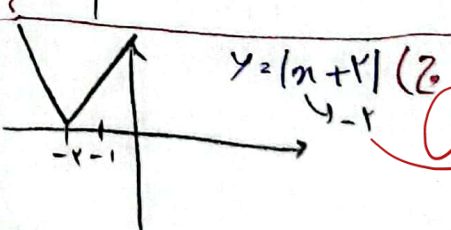
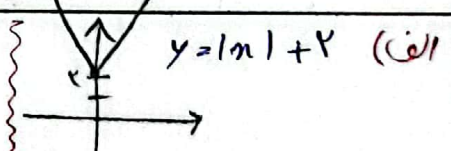
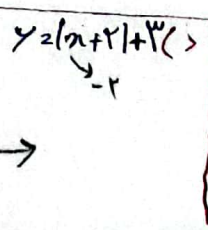
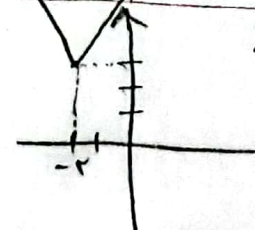
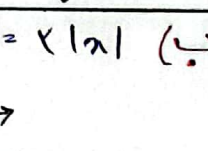
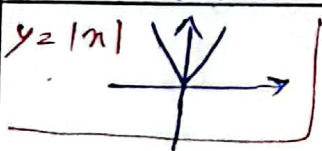
(د) $y = \frac{x+4}{x^2-4x^2} \rightarrow x^2-4x^2 \neq 0 \rightarrow x^2(x^2-4) \neq 0 \Rightarrow x^2(x-2)(x+2) \neq 0 \Rightarrow D_f = \mathbb{R} - \{-2, 0, 2\}$

(الف) $\sqrt{4-x} + \sqrt{x-2}$ $\begin{cases} 4-x \geq 0 \rightarrow x \leq 4 \\ x-2 \geq 0 \rightarrow x \geq 2 \end{cases}$ $D_f = [2, 4]$

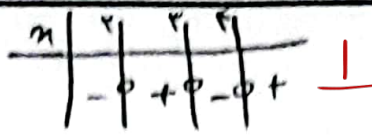
(ب) $y = \frac{3x+1}{2x+1} \rightarrow 2x+1 \neq 0$ $\Rightarrow D_f = \mathbb{R}$

(ج) $y = \frac{\sqrt{x-2}}{x-4} \rightarrow \begin{cases} x-2 \geq 0 \rightarrow x \geq 2 \\ x-4 \neq 0 \rightarrow x \neq 4 \end{cases}$ $D_f = (2, \infty) - \{4\}$

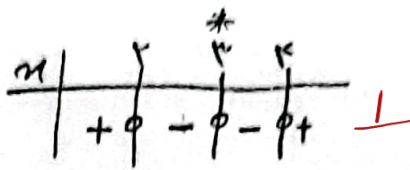
(د) $y = \frac{4x+3}{|x|+x^2} \rightarrow |x|+x^2 \neq 0$ $D_f = \mathbb{R} - \{0\}$



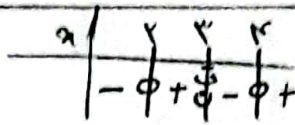
الف) $y = (x-2)(x-3)(x-4)$



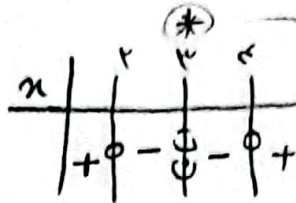
ب) $y = (x-2)(x-3)^2(x-4)$



الف) $y = \frac{(x-2)(x-4)}{x-3}$

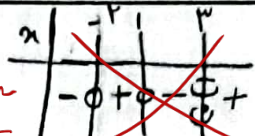


ب) $y = \frac{(x-2)(x-4)}{(x-3)^2}$



چون توان ۲ داریم
ریشه ۳ مضاعف می شود

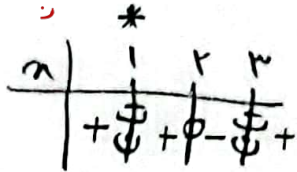
الف) $y = \frac{x^3 - 3x + 2}{x-2}$



تجربه عددی کردم توانم صورت
کسر را صفر کنه ۱ و ۲ هسته

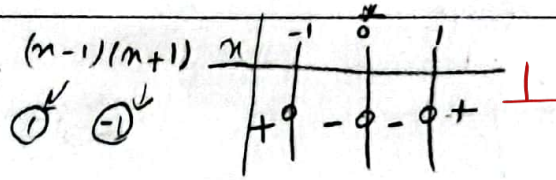
بجای ضرب میزنم

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

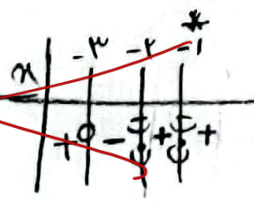


برای بدست آوردن ریشه از سوالات
عبارت ها را مساوی صفر قرار
دادم

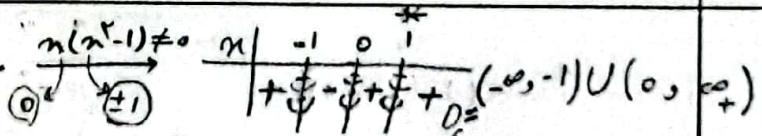
الف) $y = \frac{x^4 - x^2}{x^2 + x + 2}$



ب) $y = \frac{x^2 + 3x + 2}{x^2 + 2x + 3}$



الف) $y = \sqrt{\frac{x^3 - 1}{x^3 - x}}$



ب) $y = \sqrt{\frac{x^2 - 14}{x^2 - 5x + 6}}$

