

دو \$A\_{\text{مربوعه}}\$

5 با سطر اول

$$f(x) = k \cdot a^x \cdot f(x) \cdot \frac{1}{x} = m \cdot \frac{(1-a)^{x-1}}{x-1} = \frac{ka}{x} = \frac{a}{x} - 1$$

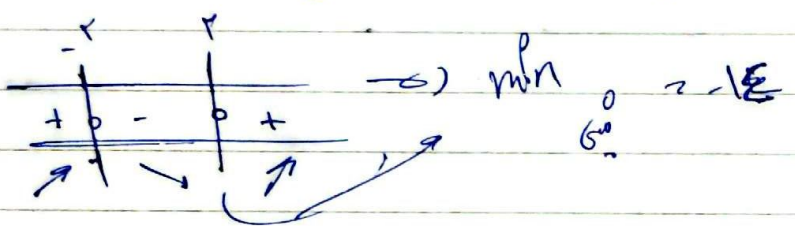
$$\Rightarrow f'(x) = \frac{a}{x^2} \Rightarrow \frac{a}{x^2} = \frac{a}{x} \Rightarrow a = \pm \sqrt{x} \quad \leftarrow \sqrt{x} \text{ و } -\sqrt{x} \text{ و } \frac{a}{x}$$

1  
 $y = \sum ax - 1 = -1 \Rightarrow \sum ax = 0 \Rightarrow x = \frac{1}{a} \Rightarrow f\left(\frac{1}{a}\right) = -\frac{1}{a}$

$$\Rightarrow \frac{x}{a} - \frac{1}{a} = 0 \Rightarrow x = 1 \Rightarrow y = \frac{1}{a} \Rightarrow a = \pm \frac{1}{x} \Rightarrow a = \pm \frac{1}{x}$$

\$\rightarrow a = -\frac{1}{x}\$

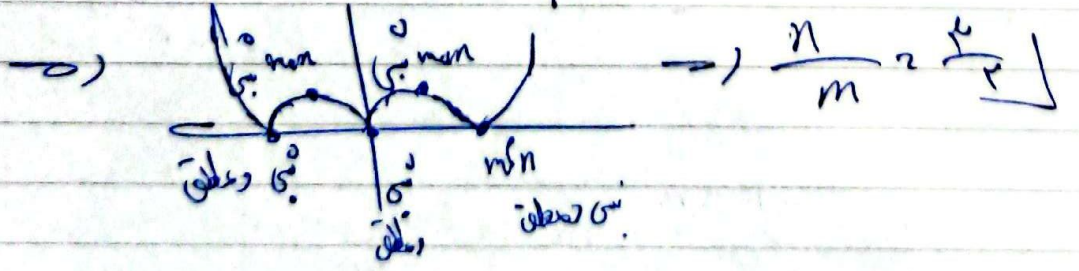
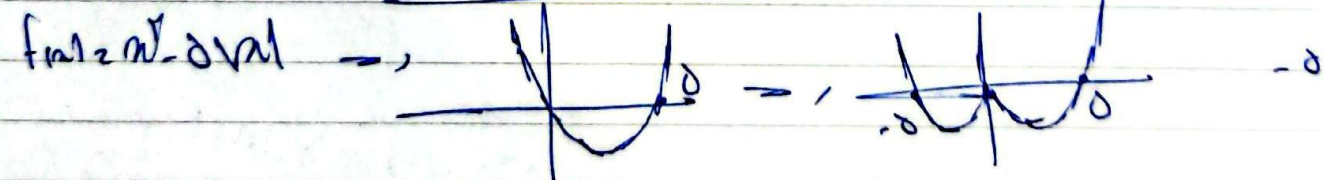
$$y = x^m - kx + 1 \Rightarrow y' = mx^{m-1} - k \Rightarrow y' = k(m-1) = 0 \Rightarrow m = \pm 1$$



بانه در نقاط اول \$\Rightarrow f'(x) = f'(0) = 0\$

$$y = x^m + ax^2 - bx - c \Rightarrow y' = mx^{m-1} + 2ax - b \Rightarrow -b = 0 \Rightarrow b = 0$$

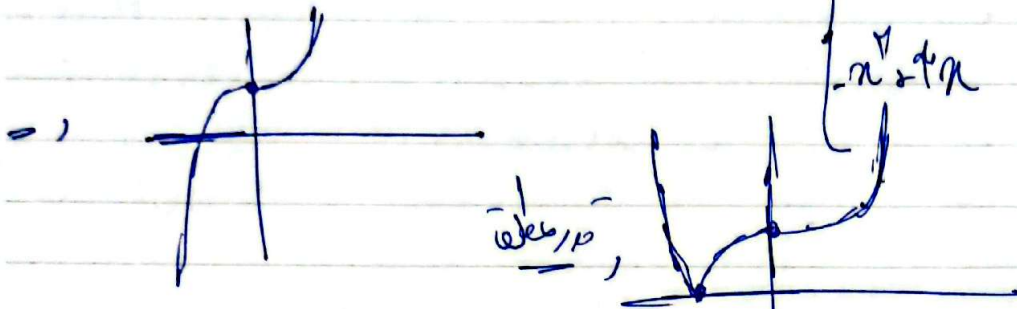
$$k - 2a = 0 \Rightarrow a = \frac{k}{2} \Rightarrow y = x^m + \frac{k}{2}x^2 - c \Rightarrow \frac{1}{2}, \frac{1}{2} \cdot \frac{kb}{b^2}$$



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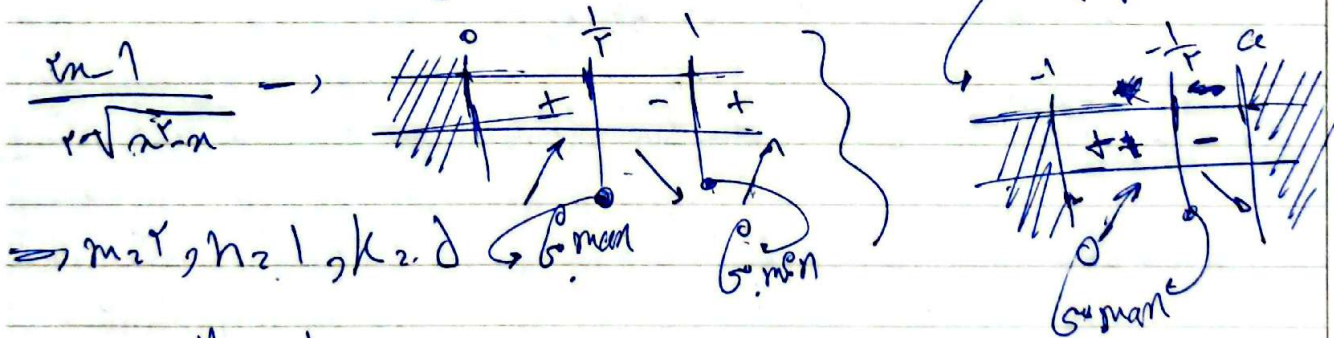
$$y = |a(m+1)| - |a| \cdot \epsilon \quad \xrightarrow{\text{بجای } \epsilon}, \begin{cases} n+1 & n > 0 \\ -n+1 & n < 0 \end{cases}$$



$$f(x) = \sqrt[n]{n^m |m-a|} \Rightarrow \sqrt[n]{n^m (a-n)} \Rightarrow f(m) = \frac{r(a-n)}{\sqrt[n]{n^m}} = \sqrt[n]{n^{r-m}}$$

→

$$y = \sqrt[n]{|a| \cdot n} \Rightarrow \begin{cases} \sqrt[n]{n^r \cdot n} & n > 0 \\ \sqrt[n]{-n^r \cdot n} & n < 0 \end{cases} \xrightarrow{\text{بجای } \epsilon} \begin{cases} \frac{r-1}{r} & \rightarrow 1 \\ \frac{-m-1}{r} & \end{cases}$$



$$\Rightarrow \frac{1}{\epsilon}$$

$$(1+\epsilon) \in D_f \Rightarrow |m-1| < \epsilon \Rightarrow m > 0 \text{ و } y = \frac{m(m-1)-r}{(n(m-1))^r} \cdot \epsilon$$

$$\Rightarrow |m^2 - m - r| < (m-1)^r \cdot \epsilon \Rightarrow -1 < m < r$$

$$\Rightarrow 0 < m < \frac{r+1}{2} \quad \text{بجای } \epsilon \quad m > 0 \quad \text{و} \quad m < 1$$

D

$$n \geq 0$$

$$n < 0$$

$$D_f = \mathcal{L}\{-1\}$$

$$\rightarrow f(n) = \frac{n}{1-n^2} \quad \downarrow \quad \frac{n}{1+n^2}$$

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$$\rightarrow f'(n) = \begin{cases} \frac{(1-n^2) - (1+n^2)n}{(1-n^2)^2} = \frac{n^2+1}{(1-n^2)^2} \quad \{n \geq 0\} \\ \frac{(1+n^2) - (1-n^2)n}{(1+n^2)^2} = \frac{1-n^2}{(1+n^2)^2} \quad \{n < 0\} \end{cases}$$

$\rightarrow n < -1$