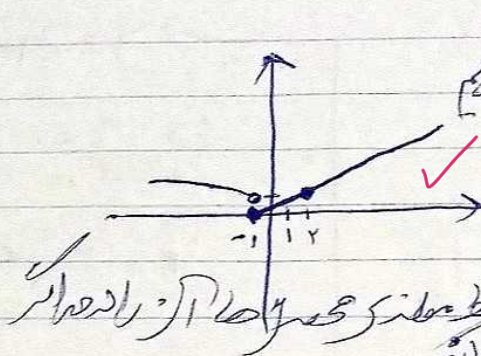


②

1

$$x \begin{cases} y-1 & y \geq 0 \\ -y & y < 0 \end{cases}$$

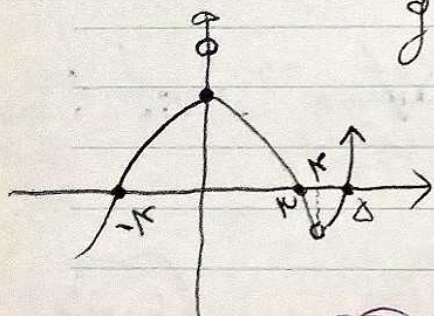


از رسم سلسله کتب کتب

$$y = \frac{x+1}{x} \quad y \geq 0$$

$$y = \pm \sqrt{-2x}, \quad y \geq 1$$

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مجلس



$$g(x) = \sqrt{\frac{x f(x-1)}{f(x)}} \rightarrow \frac{0 \cdot 1}{2} \rightarrow x=0$$

حی انوار میں نہ جڑو ۳ و ۴۔

$$f(x) = f(x) \pm f(-\varepsilon) \approx 0$$

$$f(x) \in \sqrt{f(v) \pm f(w) \pm f(-1)} = 0$$

V 9 29-5

فقط حواس باشد که $x=4$ در دامنه است و $x=4$ در دامنه نیست

$P_f = (-5, -1] \cup [0, 3) \cup [6, \infty)$

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

$$X^F - \varepsilon X \xrightarrow{f \circ \gamma} X(\gamma^F - \varepsilon) \rightarrow X(X^F)(X^F) \rightarrow X^F \circ \gamma^F - \gamma^F$$

$D_{\text{deg}}^2 \rightarrow \text{IR} = \{\pm 1, 0\}$

$$D_{\sqrt{f(x)}} = \{R - (-\infty, -\gamma] \cup [\gamma, \infty)\}$$

$\text{Pn} \rightarrow \Delta$

$$\mathcal{L}^w - \mathcal{E} \mathcal{L} \rightarrow \mathcal{L}^w$$

$$D_f = (-r, 0) \cup (r, +\infty)$$

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

$$\underbrace{(x^T \varepsilon)(x^T b)}_{\text{Bias}}$$

$$D_f = (r_1 + \alpha) - \{r\}$$

$$-y + y^* + \{ \text{IR} \} \{ \infty, -y, y, y^* \}$$

$$\Rightarrow y = \frac{r_{x+1}}{r - r_{-x}}$$

$$P \rightarrow \neg \neg P$$

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$$y \notin [-2, 3]$$

$$[+2, 3] \neq -2 \rightarrow [-3, -2] \neq 2$$

$$f) y = \frac{\sqrt{2x(x^2-1)}}{\sqrt{12x+x}}$$

$$| \mathcal{H} | \rightarrow \mathcal{H} \geq 0 \rightarrow \mathbb{R}^+$$

Elegance

$$b) \quad y \approx \frac{\sqrt{|x-1|-x^2}}{|x|-1}$$

$$|x| \neq 1 \rightarrow x \neq \pm 1 \rightarrow x \in (-1, 1) \cup (1, \infty)$$

$$|x-2| = x^2 \quad 110$$

$$\frac{-x^2 + 9x - 14}{(x+1)(x-2)} \rightarrow \Delta < 0, \Delta > 0, \Delta = 0$$

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$$a) y = \sqrt{(x-2)(x+3)}$$

6

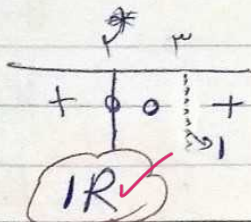
$$x-2=0 \rightarrow x=2$$

$$\{x+3\} \geq 0$$

$$\{x-2\} \geq 0$$

$$\{x\} \geq 2$$

$$x \in [2, +\infty)$$



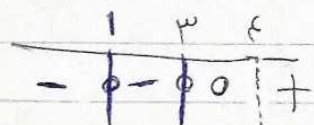
$$b) y = \sqrt{|x-1|(x-3)}$$

$$\{x-1\} \geq 0$$

$$\{x-3\} \geq 0$$

$$\{x\} \geq 3$$

$$x \in [3, +\infty)$$

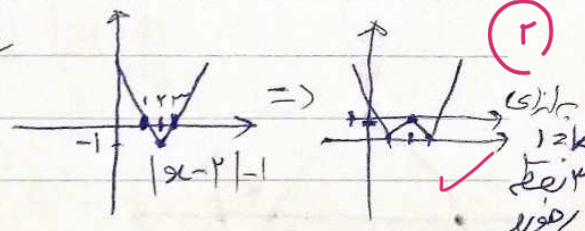


$$\{1\} \cup [3, +\infty)$$

(r)

$$y = \frac{1}{||x-2|-1|-k}$$

Pol: $\rightarrow$ بسط



7

$$||x-2|-1| \geq k$$

$$|x-2|-1 \geq \pm k$$

$$|x-2| \geq k+1$$

$$x-2 \geq k+1 \rightarrow x \geq k+3$$

$$x-2 \leq -(k+1) \rightarrow x \leq -k+1$$

(r)

$$f(x) = \frac{x^2 + 2x + 2}{x^2 + 2x + 1} \rightarrow (x+2)(x+1) \rightarrow x \neq -1$$

$$\frac{x+1}{x-1} \rightarrow x \neq 1$$

بسط
مخرج مشترك

(r)

$$x^2 - 4x + 4 = 0 \rightarrow x^2 - 4x + 4 = 0$$

$$(x-2)^2 = 0$$

یک ریشه مضاعف

8

$$y = \log_{\frac{1}{x}} \frac{1}{x}$$

$$\frac{x+1}{x} > 0$$

$$\frac{x}{x-1} > 0$$

$$\frac{x+1}{x} \neq 1$$

$$\frac{x}{x-1} \neq 0$$

$$x > 0$$

$$x \neq 1$$

$$\log_{\frac{1}{x}} \frac{1}{x} > 0 \rightarrow \frac{1}{x} > 1 \rightarrow x < 1$$

$$D_f = (0, 1) \checkmark$$

(r)

$$D_f = [-2, 3]$$

$$D_f(x^2-1) = \left[-\frac{\sqrt{x^2-1}}{x}, \frac{\sqrt{x^2-1}}{x}\right]$$

$$D_f(x^2-1) = \emptyset$$

$$-2 \leq x^2-1 \leq 3 \rightarrow -\sqrt{x^2-1} \leq \sqrt{x^2-1} \leq \sqrt{x^2-1}$$

$$x^2 \leq 4$$

$$x^2 \leq 4$$

$$-\frac{\sqrt{x^2-1}}{x} \leq x \leq \frac{\sqrt{x^2-1}}{x}$$

Elegance

(r)