

(B) ...

18, 5

$$\sqrt{(a-r)x^2 + ax + b}$$

$\Rightarrow$ خط داریم $a=r$

$$r = \frac{b}{a} \Rightarrow rx + b \Rightarrow r + b = 0 \Rightarrow b = -r \quad \text{پ}$$

$$\sqrt{x^2 + rx + r - m^2}$$

$$Df = R \Rightarrow \begin{matrix} a > 0 \\ \Delta \leq 0 \end{matrix} \Rightarrow f - \Delta + f m^2 \leq 0$$

$$1 - (-1) = 2 \quad \text{پ}$$



$$\varepsilon m^2 \leq f \Rightarrow m^2 \leq 1 \Rightarrow -1 \leq m \leq 1$$

min max

$$\frac{\sqrt{f - x^2}}{[x] + [-x] + 1}$$

$$\textcircled{1} \quad f - x^2 \geq 0 \Rightarrow x^2 \leq f \Rightarrow -\sqrt{f} \leq x \leq \sqrt{f}$$

$$\textcircled{2} \quad [x] + [-x] \neq -1 \Rightarrow x \in \mathbb{Z}$$

$$\{-2, -1, 0, 1, 2\} \subseteq \mathbb{N}$$

$$\downarrow$$

0

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$$[x] + [-x]$$

$$\sqrt{x^2 + rx} \Rightarrow \sqrt{x^2(x+r)} \geq 0$$

$$\begin{array}{c|c|c} -r & 0 & r \\ \hline - & + & + \end{array} \quad Df = [-r, +\infty)$$

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$$\sqrt{\frac{(x-1)(x+1)x^2(x-r)}{(x-1)(x^2+x+1)}}$$

$\Delta < 0$

$$x \begin{matrix} \swarrow & \downarrow & \searrow \\ 1 & -1 & r \end{matrix}$$

$$\begin{array}{c|c|c|c|c} -1 & 0 & 1 & r & \end{array} \quad (-\infty, -1] \cup \{0\} \cup [r, +\infty)$$

$$\text{الف) } y = \sqrt{|x-2| - 3} \Rightarrow |x-2| \geq 3 \Rightarrow \begin{matrix} x-2 \geq 3 & x \geq 5 \\ x-2 \leq -3 & x \leq -1 \end{matrix} \quad (-\infty, -1] \cup [5, +\infty)$$

$$\text{ب) } \sqrt{f - |r-x|}$$

$$\Rightarrow f - |r-x| \geq 0 \Rightarrow |r-x| \leq f$$

$$\begin{matrix} -f \leq r-x \leq f \\ \downarrow \text{ for } x \\ -f \leq -x \leq f \\ \downarrow \text{ for } x \\ -f \leq x \leq f \end{matrix}$$

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$$9) \log_{1/5} \log_5^{x-1} \rightarrow x-1 > 0 \rightarrow x > 1$$

$$\log_5^{x-1} > 0 \rightarrow x-1 > 0 \rightarrow x-1 > 1 \rightarrow x > 2$$

$$\log_{1/5} \log_5^{x-1} \geq 0 \xrightarrow[\text{مستند!}]{\text{منجانبه در ا}} \log_5^{x-1} \leq 1/5 \rightarrow \log_5^{x-1} \leq 1 \rightarrow x-1 \leq 5 \rightarrow x \leq 6 \rightarrow x \leq 3$$

$$\hookrightarrow D_f = (1, 3]$$

$$10 - \text{ب}) \frac{x-1}{x+1} > 0 \rightarrow x > 1 \leq x < -1$$

$$\log_{1/5} \frac{x+1}{x-1} \geq 0 \rightarrow \frac{x-1}{x+1} \geq (1/5) \rightarrow \frac{x-1}{x+1} \geq 1 \rightarrow \frac{x-1}{x+1} - 1 \geq 0 \rightarrow \frac{x-1-x-1}{x+1} \geq 0 \rightarrow \frac{-2}{x+1} \geq 0$$

$$x+1 < 0 \rightarrow x < -1 \rightarrow D_f = (-\infty, -1)$$