

نیمه افتد منس $\star$ یا در هم $\star$ تلف

$f(x) = \sqrt{(a-x)x^2 + ax + b}$ $\xrightarrow{ns^2}$ $\sqrt{4+b} \leq 0 \rightarrow b \leq -4$

$D_f \subseteq [x_0 + \epsilon) \rightarrow y = ax + b, a - 2 \leq 0 \rightarrow a \leq -2$

$f(x) = \sqrt{x^2 + 2ax + 2 - m^2} \geq 0 \quad (n+1)^2 + 1 - m^2 \geq 0 \rightarrow 1 - m^2 \geq 0 \rightarrow m^2 \leq 1 \rightarrow -1 \leq m \leq 1$

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الف) $y \leq \frac{x+r}{|x+1|-|x+r|} \neq 0$

$|x+1| \neq |x+r|$
 $x+1 \neq x+r \quad x \neq r$
 $x+1 \neq -x-r \quad x \neq -\frac{r}{2}$

$D_s: \mathbb{R} - \left\{ -\frac{r}{2}, r \right\}$

ب) $y \leq \sqrt{|x+1|-|x+r|}$

$|x+1| \geq |x+r|$
 $x+1 \geq x+r \quad x \geq r$
 $x+1 \leq -x-r \quad x \leq -\frac{r}{2}$

$D_s: (-\infty, -\frac{r}{2}] \cup [r, \infty)$

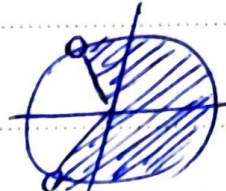
$f(n) \leq \sqrt{\log_{a}^{(n)} a} \geq 0$

منابع منبر
 مبرهنه
 $\log_a^{n-1} \leq 1 \rightarrow x_{n-1} \leq \Delta \rightarrow x_n \leq r$

$\log_a^{n-1} > 0 \rightarrow x_{n-1} > 1 \rightarrow x > 1$

$x_{n-1} > 0 \quad \left. \begin{matrix} x > \frac{1}{r} \\ x \leq r \\ x > \frac{1}{r} \end{matrix} \right\} \rightarrow f \in (1, r]$

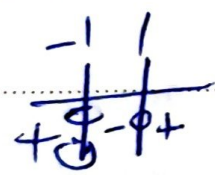
الف) $y \leq \log(r \cos t) > 0 \quad r \cos t > 1 \quad \cos t > \frac{1}{r}$



ب) $y \leq \sqrt{\log \frac{n-1}{n+1}} \geq 0$

$D_s: (rk\pi - \frac{r\pi}{2}, rk\pi + \frac{r\pi}{2})$

$\rightarrow \frac{n-1}{n+1} > 0$



$\frac{n-1}{n+1} > 1 \rightarrow \frac{n-1-n-1}{n+1} \geq 0 \rightarrow \frac{-r}{n+1} \geq 0 \rightarrow n+1 \leq -1$

$\rightarrow (-\infty, -1) \cup (1, +\infty)$

$D_s: (-\infty, -1)$

$$x \geq 0 \rightarrow 1 - x^2 \geq 0 \rightarrow x^2 \leq 1 \rightarrow -1 \leq x \leq 1 \xrightarrow{x \geq 0} 0 \leq x \leq 1$$

4- الف) $1 - x|x| \geq 0$

$x \leq 0 \rightarrow 1 + x^2 \geq 0$

$x \geq 0 \rightarrow 1 - x^2 \geq 0 \rightarrow x^2 \leq 1 \rightarrow -1 \leq x \leq 1 \xrightarrow{x \geq 0} 0 \leq x \leq 1$

همواره مثبت $\rightarrow$

البته مرتباً هم نشد تا برآرسد کنیم

$D_f = (-\infty, 1] \leftarrow$

4- ب) $3 - |x - 5| \geq 0 \rightarrow |x - 5| \leq 3 \rightarrow -3 \leq x - 5 \leq 3 \rightarrow 2 \leq x \leq 8$

$\sqrt{3 - |x - 5|} - 1 \neq 0 \rightarrow \sqrt{3 - |x - 5|} \neq 1 \rightarrow 3 - |x - 5| \neq 1 \rightarrow |x - 5| \neq 2 \rightarrow x \neq 3, 7$

$D_f = [2, 8] - \{3, 7\} = [2, 3) \cup (3, 7) \cup (7, 8]$