

امیر مہدی بدایونی

مجموع ضرایب مختلف

$$\begin{array}{r} \delta x^{\mu} - \Lambda x^{\mu} \\ - \delta x^{\mu} + 0 x^{\mu} \\ - x^{\mu} + x^{\mu} \\ + x^{\mu} - x^{\mu} \\ \hline 00 \end{array}$$

$$\begin{aligned} & \rightarrow x^2 + 0x - 9 \rightarrow (x+3)(x-3) \rightarrow x_1 = \frac{6}{4} = \frac{3}{2} \\ & \rightarrow x_2 = \frac{1}{4} = \frac{1}{4} \end{aligned}$$

$$\rightarrow D_2 | R = \left\{ +\frac{1}{r}, 9, 19, -\mu \right\}$$

$$\begin{array}{r} 21^{\mu} + 9m^{\mu} + 1m + \mu \\ - 21^{\mu} - 2m^{\mu} \end{array} \quad \left| \frac{21+1}{21^{\mu} + 2m + \mu} \right.$$

$$\begin{array}{r} \sqrt{2x+1} - \sqrt{x} \\ \sqrt{2x+1} - \sqrt{x} \\ \hline 2x+1-x \\ \hline x+1 \end{array}$$

$$\begin{aligned} (n^2 + 4n + 4) &= (n+2)^2 \\ \rightarrow (n+2)(n+2) &\rightarrow n_1 = -1 \rightarrow -\frac{1}{4} \\ &\quad \searrow n_2 = -3 \rightarrow -\frac{9}{4} \end{aligned}$$

$$\rightarrow n_2(R) = \left\{ -19, -\frac{1}{19}, 3 \right\}$$

$$y_2 = \frac{n + \mu}{n^{\mu} - n^{\mu-1} + n^{\mu-2} - \dots + 1}$$

$$\begin{array}{r} x^4 - 2x^2 + x - 1 \\ -x^4 + x^2 \\ \hline -x^2 + x - 1 \\ +x^2 - x \\ \hline -1 \\ -(-1) \\ \hline 0 \end{array} \rightarrow D_2$$

$n^2 - n + 1 \rightarrow D_2 \mid - \sum_{i=2}^3 \rightarrow DK_0$
 در اینجا حقیقت ندارد

$$P_2) \sqrt{\frac{n+3}{91^3 - 12n^2 + 12n - 1}}$$

$$\rightarrow \frac{x^k}{x^k - x^{k-1} + x^{k-1} - 1}$$

$$\rightarrow D_2 \mid R - \{1\}$$

$$Z(s) \rightarrow \frac{s^2 + 1}{s^2 + 2s + 1} \rightarrow 1 - \frac{2s}{s^2 + 2s + 1} \rightarrow 1 - \frac{2s}{(s+1)^2}$$

$$y = \frac{r}{n - 0.1 - 0.1 - 0.1}$$

①

$\rightarrow y_2 \begin{cases} \frac{r}{x^r - \delta x + 1 - rx + 0} & , x > 1 \\ \frac{r}{x^r + \delta x - \delta - rx + 0} & , x < 1 \end{cases}$

$$\rightarrow y = \begin{cases} \frac{y}{x - \sqrt{x} + 1} & , x \geq 1 \\ \frac{y}{x + \sqrt{x}} & , x < 1 \end{cases}$$

$$\rightarrow y_2 \begin{cases} \frac{y}{(x-y)(x-0)} & , x \geq 1 \\ \frac{y}{x(x+y)} & , x < 1 \end{cases} \rightarrow D_2 | R - \{y, x-y, 0\}$$

$$\begin{aligned}
 \text{الف) } y &= \frac{x+3}{|2x+1|-|x+3|} \rightarrow y = \begin{cases} \frac{x+3}{-2x-1+x+3}, & x < -\frac{1}{2} \\ \frac{x+3}{-(2x-1)-(x+3)}, & -\frac{1}{2} < x < -\frac{1}{4} \\ \frac{x+3}{2x+1-(x+3)}, & x > -\frac{1}{4} \end{cases} \\
 \rightarrow y &= \begin{cases} \frac{x+3}{-x+2}, & x < -\frac{1}{2} \\ \frac{x+3}{-x-2}, & -\frac{1}{2} < x < -\frac{1}{4} \\ \frac{x+3}{x-2}, & x > -\frac{1}{4} \end{cases} \rightarrow \begin{cases} x \neq 2 \\ x \neq -\frac{2}{3} \end{cases} \rightarrow D_2 \mathbb{R} - \left\{2, -\frac{2}{3}\right\}
 \end{aligned}$$

$$\begin{aligned}
 \text{ب) } \sqrt{|2x+1|-|x+3|} &\rightarrow |2x+1|-|x+3| \geq 0 \rightarrow |2x+1| \geq |x+3| \\
 \rightarrow (|2x+1|)^2 &\geq (|x+3|)^2 \rightarrow x^2 + 4x + 1 \geq x^2 + 6x + 9 \rightarrow x^2 - 2x - 8 \geq 0 \\
 \rightarrow x^2 - 2x - 8 &\geq 0 \rightarrow (x-4)(x+2) \geq 0 \rightarrow x_1 = -2, x_2 = 4 \\
 \rightarrow x &\in (-\infty, -2] \cup [4, +\infty)
 \end{aligned}$$

$$\begin{aligned}
 \text{الف) } y &= \log_p (1 - \log_p x) \rightarrow x > 0 \quad \text{I} \\
 &\rightarrow 1 - \log_p x > 0 \rightarrow \log_p x < 1 \rightarrow x < p \quad \text{II} \\
 \text{I} \cap \text{II} &\rightarrow 0 < x < p \rightarrow D_2(0, p)
 \end{aligned}$$

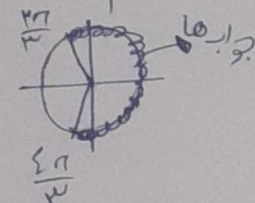
$$\begin{aligned}
 \text{ب) } y &= \log_p (1 - \log_p \frac{1}{p}) \rightarrow x > 0 \quad \text{I} \\
 &\rightarrow 1 - \log_p \frac{1}{p} > 0 \rightarrow \log_p \frac{1}{p} < 1 \xrightarrow{\text{بما أن } 0 < b < 1} x > \frac{1}{p} \quad \text{II} \\
 \text{I} \cap \text{II} &\rightarrow D_2(\frac{1}{p}, +\infty)
 \end{aligned}$$

$$\begin{aligned}
 \text{ج) } f(x) &= \sqrt{\frac{\log_0(x-1)}{\log_0 \frac{1}{p}}} \quad \begin{aligned} 2x-1 > 0 &\rightarrow x > \frac{1}{2} \rightarrow x > \frac{1}{p} \quad \text{I} \\ \log_0 \frac{1}{p} > 0 &\rightarrow p-1 > 1 \rightarrow p > 2 \rightarrow x > 1 \quad \text{II} \end{aligned} \\
 &\geq 0 \rightarrow \log_0(x-1) \leq 1 \rightarrow x-1 \leq 0 \rightarrow x \leq 1 \rightarrow x \leq p \quad \text{III} \\
 \text{I} \cap \text{II} \cap \text{III} &\rightarrow D_2(1, p]
 \end{aligned}$$

یازدهم درس

ادامه تکلیف ۳

امیر محمد علی قزوینی

الف) $y_2 \log(2 \cos x + 1) \rightarrow 2 \cos x + 1 > 0 \rightarrow 2 \cos x > -1$
 $\rightarrow \cos x > -\frac{1}{2} \rightarrow D \subset \mathbb{R} - \{2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}\}$
 $\rightarrow$  جوابها $\underline{L}$

ب) $y_2 \sqrt{\log \frac{x+1}{x-1}}$ ~~...~~ $\frac{x-1}{x+1} > 0 \rightarrow x \neq -1$ (I) $x < -1$
 $\log \frac{x+1}{x-1} \geq 0$ (II) $x+1 < 0$
 $\frac{x-1}{x+1} > 1 \rightarrow x < -1 \leq x > 1$ $\frac{x-1}{x+1} - \frac{x+1}{x-1}$
 $\log \frac{x-1}{x+1} \geq \log \frac{x+1}{x-1} \rightarrow \frac{x-1}{x+1} > 1$

۸) $f(x) = \sqrt{(4+x^2)x^2 + ax + b}$ $(-2, 3]$ باز
 باید اینکه عبارت با ۰
 در بازه‌ی گفته شده قرار
 بگیرد پس ضرایب نباید درجه ۲ باشند
 پس باید ضرایب درجه ۱ باشند
 $a+2=0 \rightarrow a=-2 \rightarrow -2x+b$ طبق بازه
 $-4+b \geq 0 \rightarrow b \geq 4$

۹) ~~...~~
 $f(x) = \sqrt{x^2 + 2x + 2 - m^2} \rightarrow D \subset \mathbb{R} \rightarrow D = b^2 - 4ac < 0 \rightarrow 1 - 4(2 - m^2) < 0$
 $\rightarrow 1 - 8 + 4m^2 < 0 \rightarrow -7 + 4m^2 < 0 \rightarrow 4m^2 < 7$
 $\rightarrow m^2 < \frac{7}{4} \rightarrow -\frac{\sqrt{7}}{2} < m < \frac{\sqrt{7}}{2}$ $\frac{\sqrt{7}}{2} \approx 1.31$ (2)

۱۰) $f(x) = \sqrt{1 - x^2} \rightarrow 1 - x^2 \geq 0 \rightarrow 1 \geq x^2 \rightarrow -1 \leq x \leq 1$ (I)
 $[x] + [-x] + 1 \in \mathbb{Z} \rightarrow [x] + [-x] \neq -1$ (II)
 $(I) \cap (II) \rightarrow D = \{-1, 0, 1\}$