

یاد رکھیں سیر B

کمران جاؤشی نرادر

$$\frac{2u^2 + 2u^2 - 1u + 3}{-2u^2 - 2u^2 + 1u - 3} \left| \frac{u+1}{2u^2 + 2u - 3} \right| \frac{u+3}{-2u^2 - 2u + 3} \left| \frac{u+1}{2u-1} \right|$$

$$\rightarrow \frac{u+3}{(u-1)(u+3)(2u-1)} \rightarrow \frac{1}{(u-1)(2u-1)} \quad D_f = R - \left\{ \frac{1}{1}, \frac{1}{2} \right\}$$

(الف) (1)

$$\frac{u+3}{2u^2 + 2u^2 - 1u + 3}$$

جمع ضربیں صفر سے بخش بڑی بر (u-1)

$$\frac{2u^2 + 2u^2 + 1u + 3}{-2u^2 + 2u^2 - 1u - 3} \left| \frac{u+1}{2u^2 + 2u + 3} \right| \frac{u+3}{-2u^2 - 2u - 3} \left| \frac{u+1}{2u+1} \right|$$

$$\rightarrow \frac{u+3}{(u+1)(u+3)(2u+1)} \rightarrow \frac{1}{(u+1)(2u+1)} \quad D_f = R - \left\{ -1, -\frac{1}{2} \right\}$$

جمع ضربیں صفر سے بخش بڑی بر (u+1)

(ب)

$$\frac{u+3}{2u^2 + 2u^2 + 1u + 3}$$

$$\frac{u^2 - 2u^2 + 2u - 1}{-u^2 + 2u^2 - 2u + 1} \left| \frac{u-1}{u^2 - u + 1} \right| \rightarrow \frac{u+3}{(u-1)(u^2 - u + 1)} \rightarrow D_f = R - \{1\}$$

☆ تیسری دم قبل دیکھیں؟

جمع ضربیں صفر سے بخش بڑی بر (u-1)

(الف) (2)

$$\frac{u+3}{u^2 - 2u^2 + 2u - 1}$$

(ب)

(3)

$$u^2 - 2(u-1) - 2u + 2 \neq 0$$

$$\begin{aligned} u-1 &\rightarrow u^2 + 2u \rightarrow u(u+2) \quad D_I = R - \{2, -2\} \\ u-1 &\rightarrow u^2 - 2u + 1 \rightarrow (u-1)(u-1) \quad D_{II} = R - \{1, 1\} \end{aligned}$$

$$I \cup II \rightarrow R - \{2, -2, 1\}$$

$$|2u+1| \neq |u+3| \rightarrow (2u+1 = u+3)^2 \rightarrow 4u^2 + 4u + 1 = u^2 + 6u + 9$$

$$\frac{2u^2 - 2u^2 - 1}{u^2 - 2u^2 - 2u} \rightarrow \frac{2}{u-2} \rightarrow \frac{2}{u-2} \rightarrow \frac{2}{u-2}$$

$$\frac{2}{u-2} \rightarrow \frac{2}{u-2}$$

$$D_f = R - \left\{ 2, \frac{2}{u-2} \right\}$$

(الف) (3)

$$\frac{-\frac{1}{r}}{+\phi - \quad \phi +}$$

(ب) $\star$ دست آید این ریشه عبارت در سمت (الف)

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$$D_f: (-\infty, -\frac{1}{r}] \cup [r, +\infty)$$

(الف) (د)

$$\log_r (1 - \log_r u) \quad I: u > 0 \rightarrow 1 - \log_r u > 0 \rightarrow \log_r u < 1 \rightarrow u < r \quad \text{II} \quad I \cap \text{II} = (0, r)$$

(ب)

$$\log_r (1 - \log_{\frac{1}{r}} u) \quad I: u > 0 \rightarrow 1 - \log_{\frac{1}{r}} u > 0 \rightarrow \log_{\frac{1}{r}} u < 1 \rightarrow u < \frac{1}{r} \quad \text{II} \quad I \cap \text{II} = (0, \frac{1}{r})$$

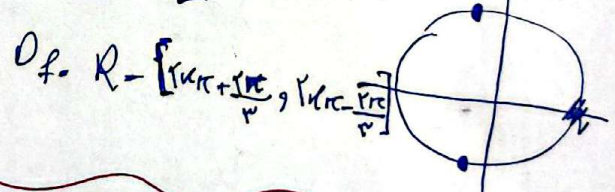
(د)

$$\sqrt{\log_{\frac{1}{r}} \log_{\frac{1}{r}} (ru-1)} \quad I: ru-1 > 0 \rightarrow ru > 1 \rightarrow u > \frac{1}{r} \quad \text{II} \Rightarrow \log_{\frac{1}{r}} (ru-1) > 0 \rightarrow ru-1 > 1 \rightarrow ru > 2 \rightarrow u > \frac{2}{r} \quad \text{III} \Rightarrow \log_{\frac{1}{r}} \log_{\frac{1}{r}} (ru-1) > 0 \rightarrow \log_{\frac{1}{r}} (ru-1) \leq 1 \rightarrow ru-1 \leq r \rightarrow ru \leq r+1 \rightarrow u \leq \frac{r+1}{r}$$

$$I \cap \text{II} \cap \text{III} = (1, r]$$

(الف) (د)

$$y = \log(r \cos u + 1) \rightarrow r \cos u + 1 > 0 \rightarrow r \cos u > -1 \rightarrow \cos u > -\frac{1}{r} \quad \text{I} \quad -1 \leq \cos u \leq 1 \quad \text{II} \quad \text{I} \cap \text{II} = [-\frac{1}{r}, 1]$$



(ب)

$$\sqrt{\log \frac{u-1}{u+1}} \rightarrow \frac{u-1}{u+1} > 0 \rightarrow u-1 > 0 \rightarrow u > 1 \quad \text{D}_f: R = [1, +\infty)$$