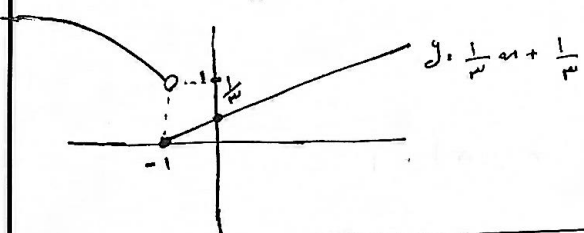


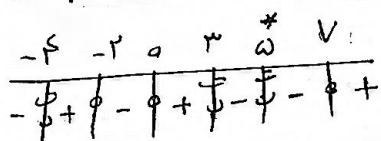
$$u = 3y - 1 \rightarrow y = \frac{1}{3}u + \frac{1}{3}, y \geq 0 \Rightarrow \frac{1}{3}u + \frac{1}{3} \geq 0 \rightarrow u \geq -1$$

$$u = -y^2 \rightarrow y = \pm \sqrt{-u} \xrightarrow{y \geq 1} y = +\sqrt{-u}, \text{ و } u < -1$$



تابع هست ✓

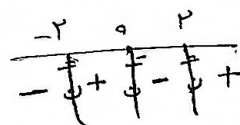
$$Df(m) : \mathbb{R} - \{4\} \quad \left\{ \begin{array}{l} u=0, f(u-2)=0 \rightarrow u-2 \in \{-1, 3, 5\} \rightarrow u \in \{-2, 5, 7\} \\ f(m)=0 \rightarrow m \in \{-1, 3, 5\} \end{array} \right.$$



$$\rightarrow Dg(m) : (-2, -2] \cup [0, 3) \cup [7, +\infty) \checkmark$$

$$\text{الف) } u^3 - 4u \neq 0 \rightarrow u(u-2)(u+2) \neq 0 \rightarrow Df(m) : \mathbb{R} - \{0, 2, -2\}$$

$$\text{ب) } f(m) > 0 \Rightarrow \frac{2m^2 - 3m + 2}{u(u-2)(u+2)} > 0 \rightarrow \text{علامت}$$



$$\rightarrow Df(m) : (-2, 0) \cup (2, +\infty) \checkmark$$

$$\text{الف) } y = \frac{u-2}{(u-2)(u+2)(u^2+2)} \quad \xrightarrow{\text{علامت}} \quad D : (-2, 2) \cup (2, +\infty) \checkmark$$

$$\text{ب) } \frac{2m^2+1}{3-2[-m]} \rightarrow 3 = 2[-m] \rightarrow [-m] = 3 \rightarrow 3 \leq -m < 3$$

$$\rightarrow Df : \mathbb{R} - (-3, -2] \checkmark$$

$$\text{الف) } f(m) = \frac{\sqrt{u(u-1)(u+1)}}{\sqrt{|u|+u}} \quad |u|+u > 0 \rightarrow u > 0 \quad \xrightarrow{2 \text{ II}} \quad Df(m) : [1, +\infty) \checkmark$$

$$\text{ب) } |u-2| - u^2 \geq 0 \quad \left\{ \begin{array}{l} u \geq 2 \rightarrow -u^2 + u - 2 \geq 0 \xrightarrow{\Delta < 0} \text{خارج از دامنه} \\ u < 2 \rightarrow -u^2 - u + 2 \geq 0 \Rightarrow -2 \leq u \leq 1 \end{array} \right.$$

$$\xrightarrow{u \neq \pm 1} Df(m) : [-2, -1) \cup (-1, 1) \checkmark$$

انت $D_f: \mathbb{R} \checkmark \Leftarrow (n-2) \{n-2\} \neq 0 \Leftarrow \{n-2\} \neq 0 \Rightarrow n-2 > 0$

ب) $\frac{1}{|n-1|} \{n-2\} \sim |n-1| \neq 0 \rightarrow \{n-2\} \neq 0 \Rightarrow n-2 > 0$

$\rightarrow D_f = [2, +\infty) \cup \{1\}$

$D_f = [2, +\infty) \cup \{1\}$ ریشه داخل قدر مطلق، عبارت را منفرد بنویس!

$| |n-2| - 1 | - k \neq 0 \rightarrow |n-2| - 1 \neq \pm k \rightarrow |n-2| \neq (\pm k) + 1$

$\rightarrow n-2 \neq \pm \{(\pm k) + 1\} \rightarrow n \neq \begin{cases} +k+3 \\ -k+3 \\ -k+1 \\ +k+1 \end{cases}$

$\Rightarrow -k+1 = k+3 \Rightarrow -2 = 2k \Rightarrow k = -1$

خارجی k به هر حقیقت باشد.

$\Rightarrow k+1 = -k+3 \Rightarrow 2k = 2 \Rightarrow k = 1$

$k = 1 \checkmark$

$\rightarrow n \neq \{3, 2, 0\} \checkmark$

$n^2 + 3n + 2 \neq 0 \xrightarrow{a+c \neq b} n \neq \{-1, -2\} \quad n-1 \neq 0 \rightarrow n \neq 1$

$\frac{n+1}{n-1} \neq \rightarrow n \neq \{-1\} \xrightarrow{\text{استدلال}} n \neq \{-1, -2, 1\} \Rightarrow n = 3 \checkmark$

$\Rightarrow n^2 - 9n + 9 = 0 \rightarrow (n-3)^2 = 0 \rightarrow n = 3 \checkmark$

$\log_n \frac{1}{n} \rightarrow n > 0, n \neq 1$

$\log_{n+1} \log_n \frac{1}{n} \rightarrow n+1 > 0 \Rightarrow n > -1, n+1 \neq 1 \Rightarrow n \neq 0$

$\log_n \frac{1}{n} > 0 \Rightarrow -\log_n n > 0 \rightarrow \log_n n < 0 \rightarrow \frac{\log_n 1}{\log_n n} < 0 \xrightarrow{+} \frac{0}{\log_n n} < 0$

$\rightarrow 0 < n < 1 \Rightarrow \text{استدلال} \rightarrow D_f = (0, 1) \checkmark$

$-2 \leq 3n^2 - 1 \leq 2 \rightarrow -\{3n^2\} \leq 2 \rightarrow -\frac{2}{3} \leq n^2 \leq \frac{2}{3}$

$\rightarrow n^2 \leq \frac{2}{3} \rightarrow -\sqrt{\frac{2}{3}} \leq n \leq \sqrt{\frac{2}{3}} \Rightarrow D_f = \left[-\sqrt{\frac{2}{3}}, \sqrt{\frac{2}{3}}\right] \checkmark$