

(الف) $\frac{x+2}{2x^2+5x-12}$ $\rightarrow -2$

$\frac{-2}{+ \mid + \mid - \mid +}$

$(2x^2+5x-12)(x-1)$

$\Delta = \frac{25 \pm \sqrt{49}}{4}$ $\begin{cases} x = -3 \\ x = 0.5 \end{cases}$

$D_f = \mathbb{R} - \{-2, \frac{1}{2}, 1\}$

(ب) $\frac{x+2}{2x^2+5x-12}$ $\rightarrow -2$

$(2x^2+5x-12)(x-1)$

$x = -2, x = -0.5$ $\rightarrow -1$

$\frac{-2}{+ \mid + \mid - \mid +}$

$D_f = \mathbb{R} - \{-2, -1, -\frac{1}{2}\}$

(الف) $\frac{x+2}{x^2-2x^2+2x-1}$ $\rightarrow -2$

$(x^2-x+1)(x-1) \Rightarrow \Delta < 0$

$\frac{-2}{+ \mid - \mid +}$

$D_f = \mathbb{R} - \{1\}$

(ب) $\sqrt{\frac{x+2}{x^2-2x^2+2x-1}} \geq 0$ $\rightarrow \frac{x+2}{x^2-2x^2+2x-1} \geq 0$

$(x^2-x+1)(x-1) \Rightarrow \Delta < 0$

$\frac{-2}{+ \mid - \mid +}$

$D_f = (-\infty, -2] \cup (1, +\infty)$

$\frac{2}{x^2-5x+6-2x+5} = \frac{2}{x^2-7x+11}$ $x \geq 1 \rightarrow \frac{2}{(x-1)(x-6)}$

$\frac{2}{x^2+5x-6-2x+5} = \frac{2}{x^2+3x}$ $x < 1 \rightarrow \frac{2}{x(x+3)}$

$D_{f_a} = [1, +\infty) - \{2, 6\}$

$D_{f_b} = (-\infty, 1) - \{-2, 0\}$

$D_f = D_{f_a} \cup D_{f_b} \Rightarrow \mathbb{R} - \{-\frac{2}{3}, \frac{6}{5}\}$

$\frac{x+2}{12x+11-12x-2} \Rightarrow |2x+1| \neq |x+2|$

$2x^2+4x+1 \neq x^2+4x+9$

$\begin{cases} 2x^2-2x-8 \neq 0 \\ x^2-2x-24 \neq 0 \end{cases} \Rightarrow (x-4)(x+4) \neq 0$

$x \neq 4, x \neq -4$

$D_f = \mathbb{R} - \{4, -4\}$

(الف) $\sqrt{|2x+1|} - |x+2| \geq 0 \Rightarrow |2x+1| \geq |x+2|$

$4x^2+4x+1 \geq x^2+4x+4 \Rightarrow 3x^2-2x-3 \geq 0 \Rightarrow (x-4)(x+\frac{3}{2}) \geq 0$

$\frac{-\frac{3}{2}}{+ \mid - \mid +}$

$D_f = (-\infty, -\frac{3}{2}] \cup [4, +\infty)$

$$y = \log_r (1 - \log_r x) \quad x > 0$$

$$1 - \log_r x > 0$$

$$\log_r x < 1 \Rightarrow x < r$$

$$D_f = (0, r)$$

$$y = \log_r (1 - \log_r \frac{1}{r}) \quad x > 0$$

$$1 - \log_r \frac{1}{r} > 0$$

$$\log_r \frac{1}{r} < 1 \Rightarrow x > \frac{1}{r}$$

$$D_f = (\frac{1}{r}, +\infty)$$

$$\sqrt{\log_{0.15} \log_{0.15} (2x-1)} \Rightarrow \log_{0.15} \log_{0.15} (2x-1) > 0 \Rightarrow \begin{matrix} 2x-1 > 0 \\ 2x > 1 \\ x > \frac{1}{2} \end{matrix} \Rightarrow \log_{0.15} (2x-1) > 0$$

$$\log_{0.15} (2x-1) < 1$$

$$2x-1 < 0.15$$

$$2x < 1.15$$

$$x < 0.575$$

$$D_f = [0.5, 0.575]$$

$$2(\cos x + 1) > 0$$

$$2(\cos x) > -1$$

$$\cos x > -\frac{1}{2}$$

الف) باید تبدیل به گاریتمش کنیم.



$$D_f = (2k\pi + \frac{2\pi}{3}, 2k\pi - \frac{2\pi}{3})$$

$$\sqrt{\log \frac{x-1}{x+1}} \Rightarrow \log \frac{x-1}{x+1} > 0 \Rightarrow$$

$$\frac{x-1}{x+1} > 0$$

$$\begin{array}{c|c|c} -1 & 1 & \\ \hline + & - & + \end{array}$$

$$\frac{x-1}{x+1} > 1$$

$$\frac{-2}{x+1} > 0$$

$$\begin{array}{c|c} -1 & \\ \hline + & - \end{array}$$

$$D_{f_a} = (-\infty, -1) \cup [1, +\infty) \quad D_{f_b} = (-\infty, -1)$$

$$D_{\text{کل}} = D_{f_a} \cup D_{f_b} \Rightarrow D_{f_{\text{کل}}} = (-\infty, -1)$$

$$f(x) = \sqrt{(a+1)x^2 + ax + b}$$

$$f(x) = \sqrt{-2x + b} \Rightarrow -2x + b \geq 0$$

$$-2(r) + b = 0 \Rightarrow b = 2$$

به ازای x برابر ضرایب.

$$a+2=0$$

$$a = -2$$

مبات یک ریشه در دو پس درجه یک هست

داده ۱۲ است پس Δ کوچکتر می باشد $\rightarrow$

$$f(x) = \sqrt{x^2 + 2x + 2 - m^2}$$

$$\Delta \leq 0 \rightarrow 4 - 4(2 - x^2)(1) \leq 0$$

$$4 - 4 + 4m^2 \leq 0 \Rightarrow 4m^2 \leq 4 \rightarrow m^2 \leq 1 \Rightarrow -1 \leq m \leq 1$$

$$1 - (-1) = 2$$

$$\frac{\sqrt{4 - x^2}}{[x] + [-x] + 1} =$$

$$4 - x^2 \geq 0$$

$$x^2 \leq 4$$

$$-2 \leq x \leq 2$$

$$D_f = \{-2, -1, 0, 1, 2\}$$

عدد گان

$$[x] \neq -([x] - 1)$$

داده کلی برابر می باشد.