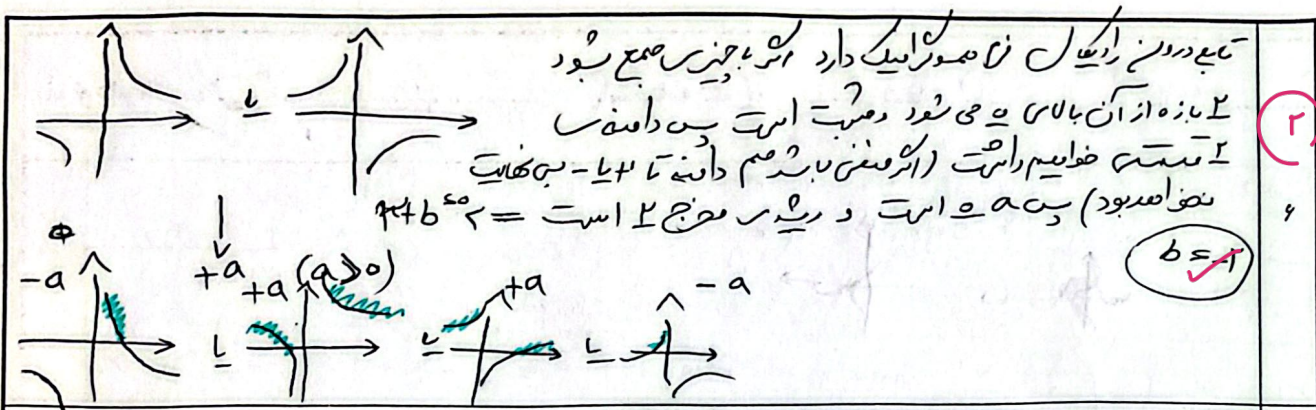




$$D_y = [-1, 0] \cup [1, +\infty)$$

$$\frac{1}{\sqrt{n-1}} \Rightarrow |n+1| > 0$$

$$= |n| > 1 \rightarrow \begin{matrix} n > 1 \\ n < -1 \end{matrix}$$

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

$$\subseteq \mathbb{R} - [-1, 1] \checkmark$$

الف

$$|n| - [n] \neq 0$$
$$\Rightarrow |n| = [n] \Rightarrow |n| \notin \mathbb{Z}^+$$
$$\mathbb{R} - \mathbb{Z}^+ \cup \{0\}$$

$$\begin{aligned} & \text{① } x > 0, y > 0 \\ & \sqrt{x} + \sqrt{y} = 9 \Rightarrow 9 - \sqrt{x} \geq 0 \Rightarrow 9 - \sqrt{x} = \sqrt{y} \Rightarrow y = 11 + x - 1\sqrt{x} \quad x > 0 \\ & [0, 11] \quad (0 \leq x \leq 11) \end{aligned}$$

$$\sqrt{\left[r_m - \frac{1}{r}\right] + \left[\frac{r_m + c}{r}\right]} \Rightarrow \underbrace{\left[r_m - \frac{1}{r}\right]}_a + \left[\frac{r_m + c}{r}\right] \neq 0, > 0$$

$$[a] + [a] + r > 0 \Rightarrow r[a] > -r \Rightarrow [a] > -\frac{1}{r}$$

$$-1 < a < -1 < r n - \frac{1}{r} \Rightarrow -\frac{1}{r} < r n \Rightarrow \frac{-1}{r} < r n$$

$$\Rightarrow \frac{-1}{r} < r n$$

$$1 - \log(rn - a) \geq 0 \Rightarrow \log(rn - a) \leq 1 \quad (rn - a > 0)$$

$$\log(rn - a) \leq 1 \quad a < rn < 1 + a \Rightarrow \underbrace{\frac{a}{r}}_b < n \leq \underbrace{1 + \frac{a}{r}}_c$$

$$c - b = 1 + \frac{a}{r} - \frac{a}{r} = 1 \quad \checkmark$$

$$\left[x_n - \frac{1}{r}\right] + \left[x_n + \frac{r}{r}\right] > 0 \rightarrow \left[x_n - \frac{1}{r}\right] + \left[x_n - \frac{1}{r} + 1\right] > 0 \quad -9$$

$$r \left[x_n - \frac{1}{r}\right] + r > 0 \rightarrow \left[x_n - \frac{1}{r}\right] > -1 \rightarrow x_n - \frac{1}{r} \geq 0 \rightarrow \boxed{x \geq \frac{1}{r}}$$

$$D = \left[\frac{1}{r}, +\infty\right)$$