

$$|x| = \frac{-2y-1}{y-1}$$

$$\frac{-\frac{1}{y}}{+\frac{1}{-1}+}$$

$$R_f = R - (-\frac{1}{y}, 1]$$

صفحة

(الف)

(1)

بزرگ بود که اسم صفر خط می خورد

$$n > 0 \rightarrow n + \frac{1}{n}$$

$$n < 0 \rightarrow -n - \frac{1}{n}$$

$$\rightarrow R_f = (-\infty, -2] \cup [1, +\infty)$$

(ب)

صفحه آخر...

(2)

$$y^2x + 3y = x^2 + 2x - 2 \rightarrow x^2 + x(1-y) - 2 - 3y = 0$$

$$x = \frac{-1-y \pm \sqrt{1+y^2-4y+1+2y}}{2} \rightarrow y^2+1y+1 \geq 0 \rightarrow (y+2)(y+1) \geq 0$$

$$\frac{-\frac{1}{y}-1}{+\frac{1}{-1}+} \rightarrow R_f = R - (-1, -2] \checkmark$$

$$x^2 - m + 1 \neq 0 \rightarrow R_f = R \setminus \{y \mid y^2 - my + y = x^2 - m + 1\}$$

$$x^2(1-y) + m(y-1) + (\frac{1}{y} + y) \rightarrow \frac{-y+1 \pm \sqrt{y^2-2y+1-4y^2y-1}}{2-y} \rightarrow y \neq 1$$

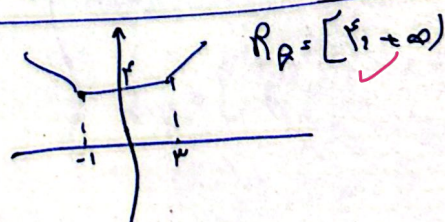
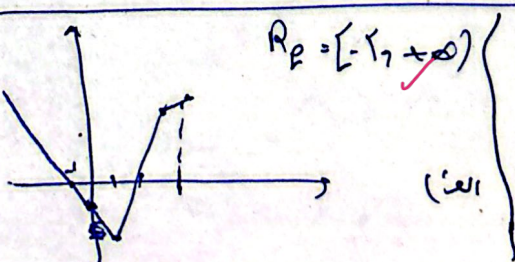
$$-4y^2+4y \geq 0 \rightarrow \frac{1}{-1+1-} R_f = [0, 1] \checkmark$$

$$\frac{-b}{r_2} = \frac{-f}{x} = 2 \rightarrow 2 \xrightarrow{a < 0} R_f = [-2, \sqrt{4}]$$

$$\frac{-b}{r_2} = \frac{1}{y} \leq f \rightarrow -1 \xrightarrow{a > 0} R_f = [-1, +\infty)$$

$$n^2 - m + 1 \rightarrow (-\infty, +\infty) \rightarrow \log(0, \infty) = (-\infty, +\infty) = R_f$$

$$n + \frac{1}{n} \rightarrow (-\infty, -1) \cup (1, +\infty) \rightarrow \log_r(1, +\infty) = [1, +\infty) = R_f$$

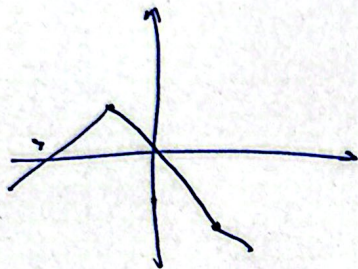


(3)

$$3 \rightarrow -2 / 2 \rightarrow -4 / -1 \rightarrow 3 / -2 \rightarrow 2$$

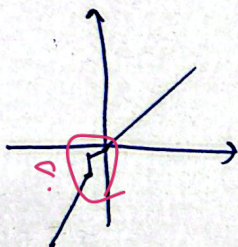
(2)
(2)

$$\begin{cases} \left| \frac{-1}{2} \right|, \left| \frac{-2}{2} \right| \rightarrow m \in \mathbb{R}, m = -3 \\ \left| \frac{-1}{2} \right|, \left| \frac{2}{-4} \right| \rightarrow -3m \leq 1 \rightarrow m \leq -\frac{1}{3} \end{cases} \begin{cases} (-\infty, -3] \\ R_f = \cup \left[-\frac{1}{3}, +\infty \right) \end{cases}$$

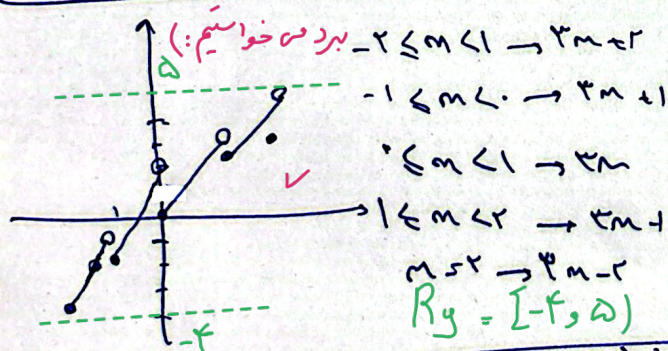
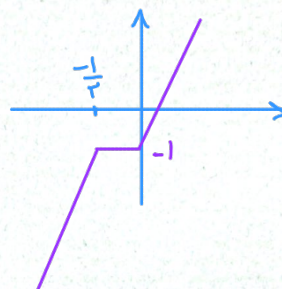


$$-1 \rightarrow -2 / -\frac{1}{2} \rightarrow -1 / 0 \rightarrow -1 / 1 \rightarrow 1$$

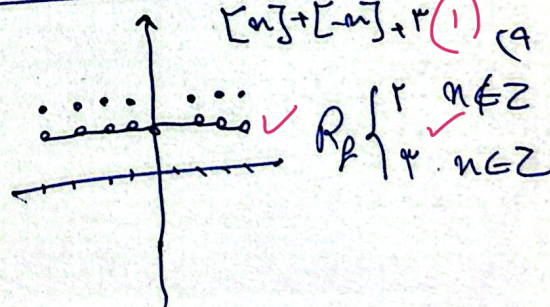
(1, 1/2)



$$R_f = R_v$$



$$R_g = [-2, \infty)$$



$$\begin{aligned} 0 &\rightarrow 1 \\ 1 &\rightarrow 3 \end{aligned}$$

$$\frac{-b}{ra} = -\frac{1}{2} \neq \sin^2 \alpha$$

$$R_f = [1, 3]$$

$$-1 \rightarrow 2$$

$$1 \rightarrow 1$$

$$-\frac{b}{ra} \rightarrow \frac{1}{2} \rightarrow \frac{3}{2}$$

$$R_f = \left[\frac{3}{2}, \frac{3}{2} \right]$$

(1) 11.