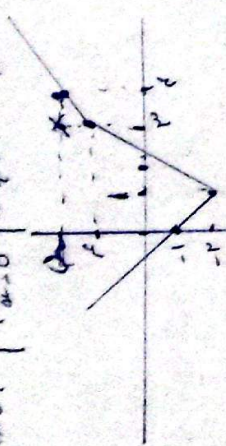
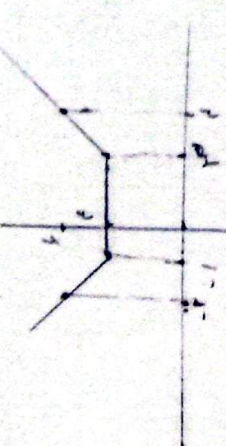
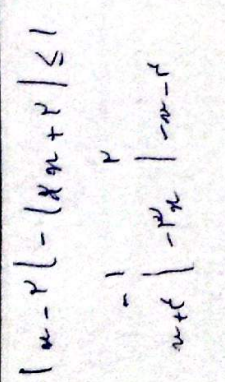
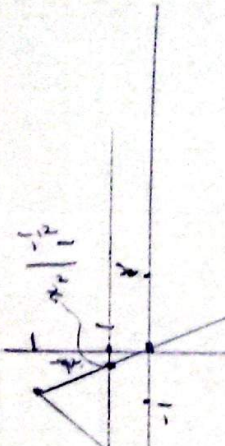
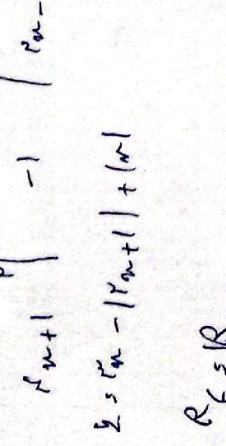
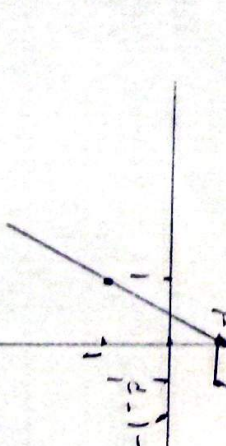
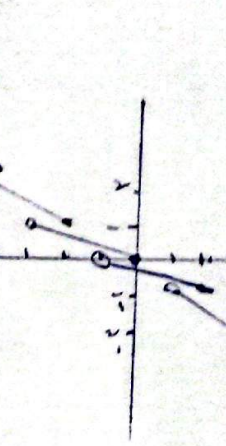


نام و نام خانوادگی	پاسخنامه تشریحی تکلیف شماره	کلاس
۱	$\frac{ m +1}{ m -p} \leq y \rightarrow m = -\frac{-p y - 1}{y - 1} \Rightarrow m = \frac{p y + 1}{y - 1} + q - \frac{1}{y} +$ $R = (-\infty, -\frac{1}{p}] \cup (1, \infty)$	
۲	$y \leq \frac{m^2 + 1}{ m } \rightarrow \frac{ m + 1}{ m } \leq y \Rightarrow m + \frac{1}{ m } \geq y \Rightarrow R = [-y, \infty)$ $t + \frac{1}{t} - 4 \geq y - 2 \rightarrow t + \frac{1}{t} \geq y - 2 \Rightarrow R = (-\infty, -\frac{1}{y}] \cup [-y, \infty)$ $t + \frac{1}{t} - 2 \leq -y - 4 \rightarrow t + \frac{1}{t} \leq -y - 2$	
۳	$\frac{x^2 - y + \frac{1}{x}}{x^2 - x + 1} \geq 0 \rightarrow x^2 - x + 1 = (x - \frac{1}{2})^2 + \frac{3}{4} > 0 \Rightarrow R = [0, 1] \cup \{x \mid x \leq -\frac{1}{2}\}$ $x^2 - x + \frac{1}{x} = (x - \frac{1}{2})^2 + \frac{3}{4} + \frac{1}{x} \rightarrow (x - \frac{1}{2})^2 + \frac{3}{4} + \frac{1}{x} \geq 0 \Rightarrow R = [0, 1] \cup \{x \mid x \leq -\frac{1}{2}\}$	
۴	$\frac{m^2 - 8m - 1}{m^2 - m + 1} \geq 0 \rightarrow -\frac{b}{a} = -\frac{p}{q} = \frac{1}{2} = y \rightarrow 8 - 14y - 8 \rightarrow R = [-8, \infty)$ $R = [-8, \infty)$	
۵	$\frac{m^2 + 1}{m} \geq m + \frac{1}{m} \rightarrow m + \frac{1}{m} \geq y \rightarrow 102^{102} = 102^{102} = 102$ $\frac{m^2 + 1}{m} \geq m + \frac{1}{m} \rightarrow m + \frac{1}{m} \geq y \rightarrow 102^{102} = 102^{102} = 102$	

الف) $x = r_{n-1} - u - r$ $-n-1 \mid r_{n-1} \mid n+1 \quad R_f = [-1, \infty)$ 	$\rightarrow y = u - r + n+1 - r_{n-1} \mid r \mid r_{n-1}$ $R_f = [r, \infty)$ 
$u - r - (r_{n-1} + r) \leq 1$ $-1 \mid r_{n-1} \mid -n-1$ $n \in (-\infty, -r] \cup [-\frac{1}{r}, \infty)$ 	
$r_{n+1} \mid -1 \mid r_{n-1}$ $x = r_n - r_{n+1} + n-1$ $R_f = \mathbb{R}$ 	
الف) $x = [u] + [r - n] \rightarrow [u] + [-n] + r$ $R_f = \{r, r\}$ 	$\rightarrow y = r_n - [n] \quad R = [-1, 0)$ 
الف) $y = S f_{n-1} - S f_{n(n)} + 1$ $\begin{cases} \min \rightarrow 1 \\ \max \rightarrow 0 \end{cases}$ $\frac{-b}{2a} = \frac{1}{2} \rightarrow \frac{r}{2}$ ب) $S f_n = t \rightarrow t + t + 1$ $\begin{cases} \min \rightarrow 0 \rightarrow 1 \\ \max \rightarrow 1 \end{cases}$ $\frac{-b}{2a} = -\frac{1}{2}$ در اینجا	$R_f = [\frac{r}{2}, r]$ $R_f = [1, r]$