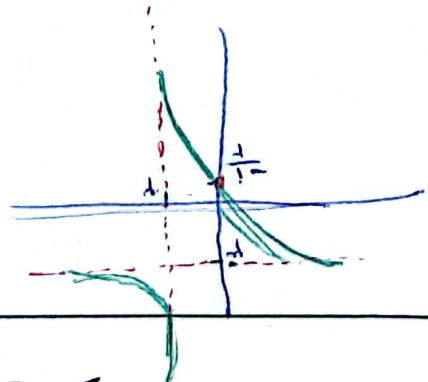


نام و نام خانوادگی: آلاء محمد سید باجمعه شریعہ للذی شماره: 4 تاریخ: 1917 محل: دفتر دهم	1 $x = \pm \sqrt{y+5} \rightarrow x^2 = y+5 \rightarrow x = \pm \sqrt{y+5}$ $x = y-1 \rightarrow x^2 = y-1 \rightarrow x = \pm \sqrt{y-1}$ $R_f = [-5, +\infty)$ $R_f = R$	2 $y = x^2 - 4x + 5 \rightarrow y = (x-2)^2 + 1 \rightarrow x-2 = \pm \sqrt{y-1} \rightarrow x = 2 \pm \sqrt{y-1}$ $y = x^2 - 5x + 1 \rightarrow y = (x - \frac{5}{2})^2 - \frac{25}{4} + 1 \rightarrow x - \frac{5}{2} = \pm \sqrt{y + \frac{21}{4}} \rightarrow x = \frac{5}{2} \pm \sqrt{y + \frac{21}{4}}$ $R_f = [1, +\infty)$ $R_f = [-\frac{21}{4}, +\infty)$	3 $x = \frac{1}{y^2 - 4} \rightarrow y^2 - 4 = \frac{1}{x} \rightarrow y^2 = \frac{1}{x} + 4 \rightarrow y = \pm \sqrt{\frac{1}{x} + 4}$ $x = 4 \pm \sqrt{14 + \frac{4}{y}} \rightarrow 14 + \frac{4}{y} = (x-4)^2 \rightarrow \frac{4}{y} = (x-4)^2 - 14 \rightarrow y = \frac{4}{(x-4)^2 - 14}$ $R_f = (-\infty, -\frac{1}{14}) \cup (\frac{1}{14}, +\infty)$ $R_f = (-\infty, -\frac{1}{14}) \cup (\frac{1}{14}, +\infty)$	4 $y = \frac{1}{x^2 - 4x} \rightarrow x^2 - 4x = \frac{1}{y} \rightarrow x^2 - 4x - \frac{1}{y} = 0 \rightarrow x = \frac{4 \pm \sqrt{16 + \frac{4}{y}}}{2} = 2 \pm \sqrt{4 + \frac{1}{y}}$ $x = 4 \pm \sqrt{14 + \frac{4}{y}} \rightarrow 14 + \frac{4}{y} = (x-4)^2 \rightarrow \frac{4}{y} = (x-4)^2 - 14 \rightarrow y = \frac{4}{(x-4)^2 - 14}$ $R_f = (-\infty, -\frac{1}{14}) \cup (\frac{1}{14}, +\infty)$ $R_f = (-\infty, -\frac{1}{14}) \cup (\frac{1}{14}, +\infty)$	5 $y = x^2 - 4x + 2 \rightarrow x^2 - 4x = -2 \rightarrow x^2 - 4x + 4 = 2 \rightarrow (x-2)^2 = 2 \rightarrow x-2 = \pm \sqrt{2} \rightarrow x = 2 \pm \sqrt{2}$ $y = -x^2 + 4x + 2 \rightarrow -x^2 + 4x = -2 \rightarrow x^2 - 4x = 2 \rightarrow x^2 - 4x + 4 = 6 \rightarrow (x-2)^2 = 6 \rightarrow x-2 = \pm \sqrt{6} \rightarrow x = 2 \pm \sqrt{6}$ $R_f = [-2, +\infty)$ $R_f = (-\infty, 6]$	6 $y = \sqrt{x^2 - 4x + 2} \rightarrow x^2 - 4x + 2 = y^2 \rightarrow x^2 - 4x + 2 - y^2 = 0 \rightarrow x = \frac{4 \pm \sqrt{16 - 4(2 - y^2)}}{2} = 2 \pm \sqrt{2 - y^2}$ $y = \sqrt{-x^2 + 4x + 1} \rightarrow -x^2 + 4x + 1 = y^2 \rightarrow -x^2 + 4x + 1 - y^2 = 0 \rightarrow x = \frac{4 \pm \sqrt{16 - 4(-1 - y^2)}}{2} = 2 \pm \sqrt{1 + y^2}$ $R_f = [-2, +\infty)$ $R_f = (-\infty, 1]$	7 $y = \sqrt{x^2 + 4x + 1} \rightarrow x^2 + 4x + 1 = y^2 \rightarrow x^2 + 4x + 1 - y^2 = 0 \rightarrow x = \frac{-4 \pm \sqrt{16 - 4(1 - y^2)}}{2} = -2 \pm \sqrt{1 + y^2}$ $y = \sqrt{x^2 + 4x + 1} \rightarrow x^2 + 4x + 1 = y^2 \rightarrow x^2 + 4x + 1 - y^2 = 0 \rightarrow x = \frac{-4 \pm \sqrt{16 - 4(1 - y^2)}}{2} = -2 \pm \sqrt{1 + y^2}$ $R_f = [-2, +\infty)$ $R_f = (-\infty, 1]$	8 $y = \sqrt{x^2 + 4x + 1} \rightarrow x^2 + 4x + 1 = y^2 \rightarrow x^2 + 4x + 1 - y^2 = 0 \rightarrow x = \frac{-4 \pm \sqrt{16 - 4(1 - y^2)}}{2} = -2 \pm \sqrt{1 + y^2}$ $y = \sqrt{x^2 + 4x + 1} \rightarrow x^2 + 4x + 1 = y^2 \rightarrow x^2 + 4x + 1 - y^2 = 0 \rightarrow x = \frac{-4 \pm \sqrt{16 - 4(1 - y^2)}}{2} = -2 \pm \sqrt{1 + y^2}$ $R_f = [-2, +\infty)$ $R_f = (-\infty, 1]$
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خلاص : (مقدمه)
 اینست سیمای کلیه حایه : ۹
 اینها خاناتی است که لا مشهوری

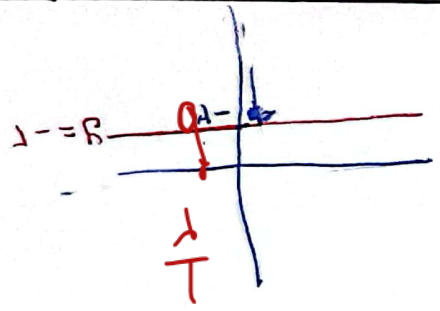
۱.۱) $y = \frac{x^2 + 1}{x - 1}$ $\rightarrow x - 1 = 0 \rightarrow x = 1$ $\rightarrow y = 2$

۱.۲) $y = \frac{x - 1}{1 - x} = -1$ $\rightarrow x - 1 = -1(1 - x) \rightarrow x - 1 = -1 + x \rightarrow x - x = -1 + 1 \rightarrow 0 = 0$



۱.۳) $y = -\frac{1}{x}$

۱۱ و ۱۱



$1 - \frac{1}{x} = 0$
 $\frac{x - 1}{x} = 0 \rightarrow x - 1 = 0 \rightarrow x = 1$

۱.۴) $y = \frac{x - 1}{1 - x} = -1$

۱۱

۱.۵) $y = \cos^2 x = \frac{1 + \cos 2x}{2}$

۱.۶) $y = \frac{x}{x^2 + 1}$

۱.۷) $y = \frac{x}{x^2 + 1}$

۱.۸) $y = \frac{x}{x^2 + 1}$