

الف) $\frac{n^2 - 8n + 3}{n^2 - 1} \geq 0 \rightarrow \frac{(n-1)(n-3)}{n^2 - 1}$ $n^2 - 1 \neq 0 \rightarrow n \neq \pm 1$ $n^2 + 1 > 0 \forall n$ $D_f = [3, \infty)$	مومن فرجه سحره نقی بیکم جعفری $n^2 - 1 \neq 0 \rightarrow n \neq \pm 1 \rightarrow n \neq \pm 1$ $D_f = R - \{\pm 1\}$	6																
الف) $\log_2 n^2 - 2n \rightarrow n^2 \geq 2n$ $\rightarrow n(n-2) \geq 0 \rightarrow \frac{0}{+} - \frac{2}{-} +$ $\rightarrow D_f = (-\infty, 0) \cup (2, \infty)$	ب) $\log_{1/2} n^2 \rightarrow$ $15n^2 \geq n^2 < 15 \rightarrow 15n^2 \geq n^2$ $n - 2 > 0 \rightarrow n > 2 \rightarrow n < -2$ $n - 2 + 1 \rightarrow n + 1 \rightarrow n \neq \pm 1$ $D_f = (-\infty, -2) \cup (2, \infty) - \{\pm 1\}$	ج) $\log_{1/2} \frac{n^2 - 4n + 1}{n^2 - 3}$ $\frac{(n-4)(n-1)}{n^2 - 3} > 0$ $\frac{+}{-} - \frac{-}{+}$ $10 - n > 0 \rightarrow n < 10$ $10 - n + 1 \rightarrow n < 9$ $D_f = (9, 10) - \{9\}$	د) $\sqrt{n^2 - 11n + 10} \geq 0$ $\rightarrow (n-1)(n-10) \geq 0$ $\frac{+}{+} - \frac{-}{-}$ $n^2 - 2n > 0 \rightarrow n^2 < 2n$ $n > 0 \rightarrow n < 2$ $n \neq 1 \rightarrow D_f = (0, 2] - \{1\}$	7														
$y = \frac{n^2 - n}{n^2 + 2n}$ $D_f = R - \{-1, 0\}$ مومن فرجه سحره نقی بیکم جعفری $\frac{n(n-1)}{n^2(n+1)}$ $\frac{+}{+} - \frac{-}{+}$	ر: (مومن): <table border="1"> <tr> <td></td> <td>-</td> <td>0</td> <td>1</td> </tr> <tr> <td>$\frac{n^2 - n}{n^2 + 2n}$</td> <td>+</td> <td>+</td> <td>-</td> </tr> <tr> <td>$\frac{n^2 + 2n}{n^2 + 2n}$</td> <td>+</td> <td>0</td> <td>+</td> </tr> <tr> <td>$D(n)$</td> <td>+</td> <td>-</td> <td>+</td> </tr> </table>		-	0	1	$\frac{n^2 - n}{n^2 + 2n}$	+	+	-	$\frac{n^2 + 2n}{n^2 + 2n}$	+	0	+	$D(n)$	+	-	+	8
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$D(n)$	+	-	+															
$\frac{n - f(n)}{f(n)} \geq 0 \rightarrow$ $n - f(n) = 2 \rightarrow f(n) \neq n \rightarrow n \neq 3, -1$ $f(n) \neq 0 \rightarrow n \neq \pm 2$ $D_f = (-2, 1] \cup (2, 3)$	$n - f(n) = 2 \rightarrow f(n) \neq n \rightarrow n \neq 3, -1$ $f(n) \neq 0 \rightarrow n \neq \pm 2$	9																
الف) $f(n) + 1$ ب) $f(n-1)$ ج) $-f(n)$ د) $f(n+1) + 2$	10																	