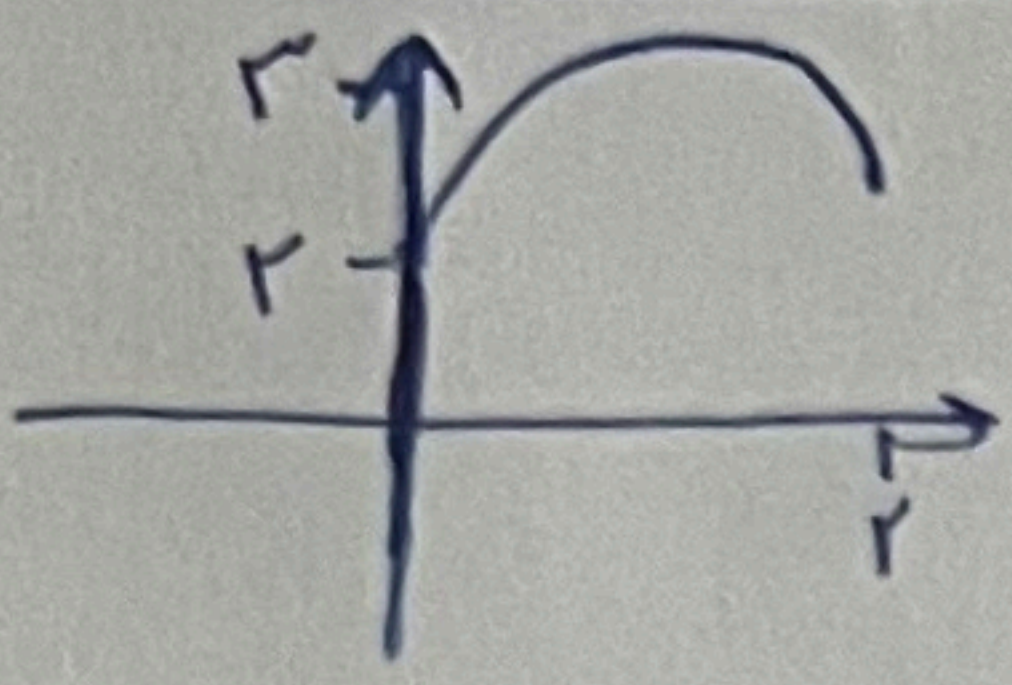
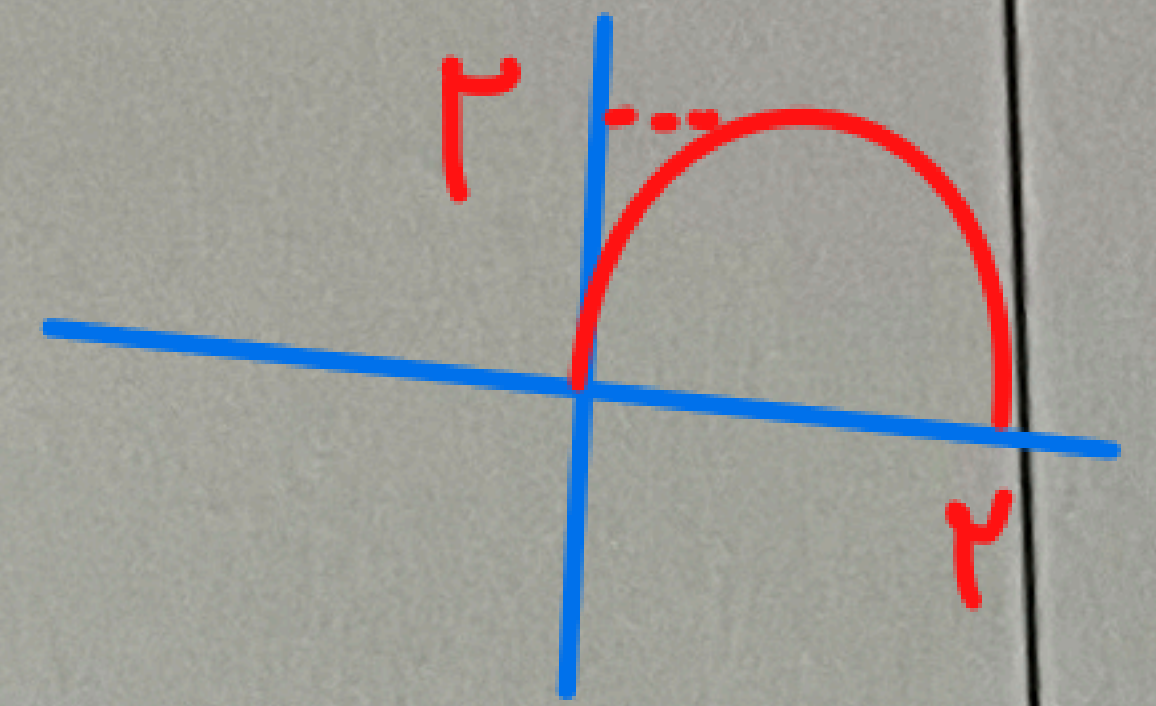
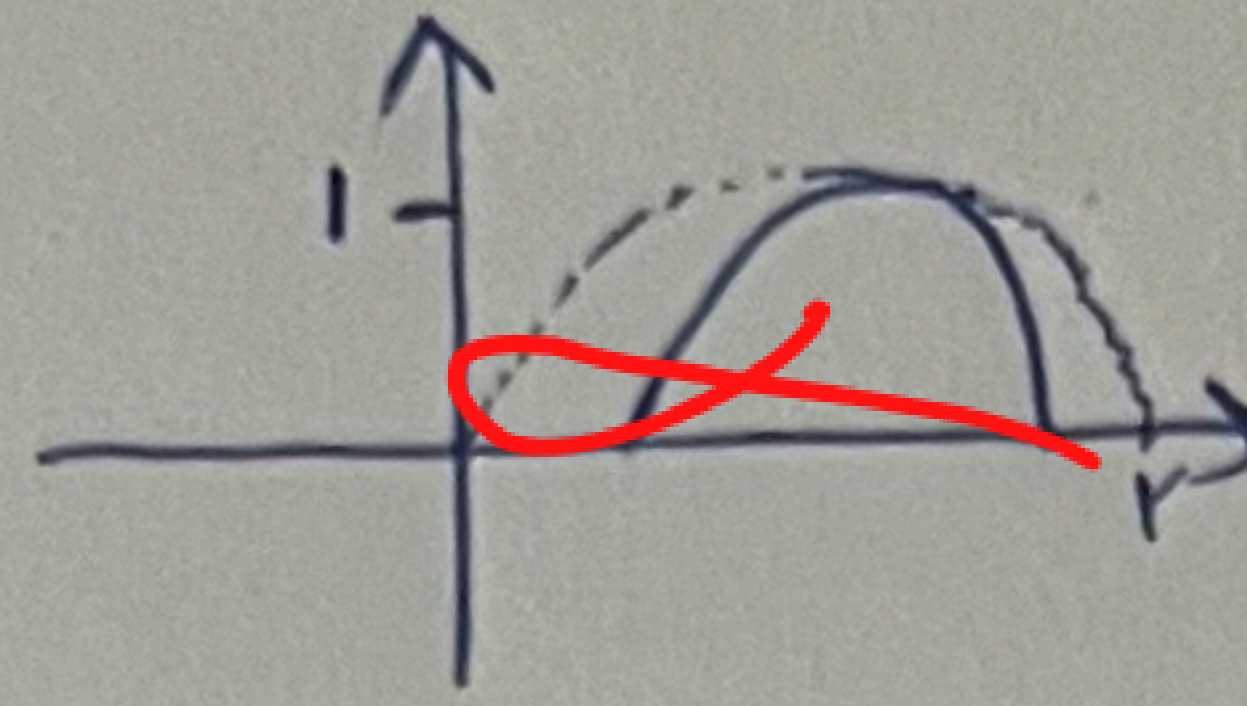


الف)

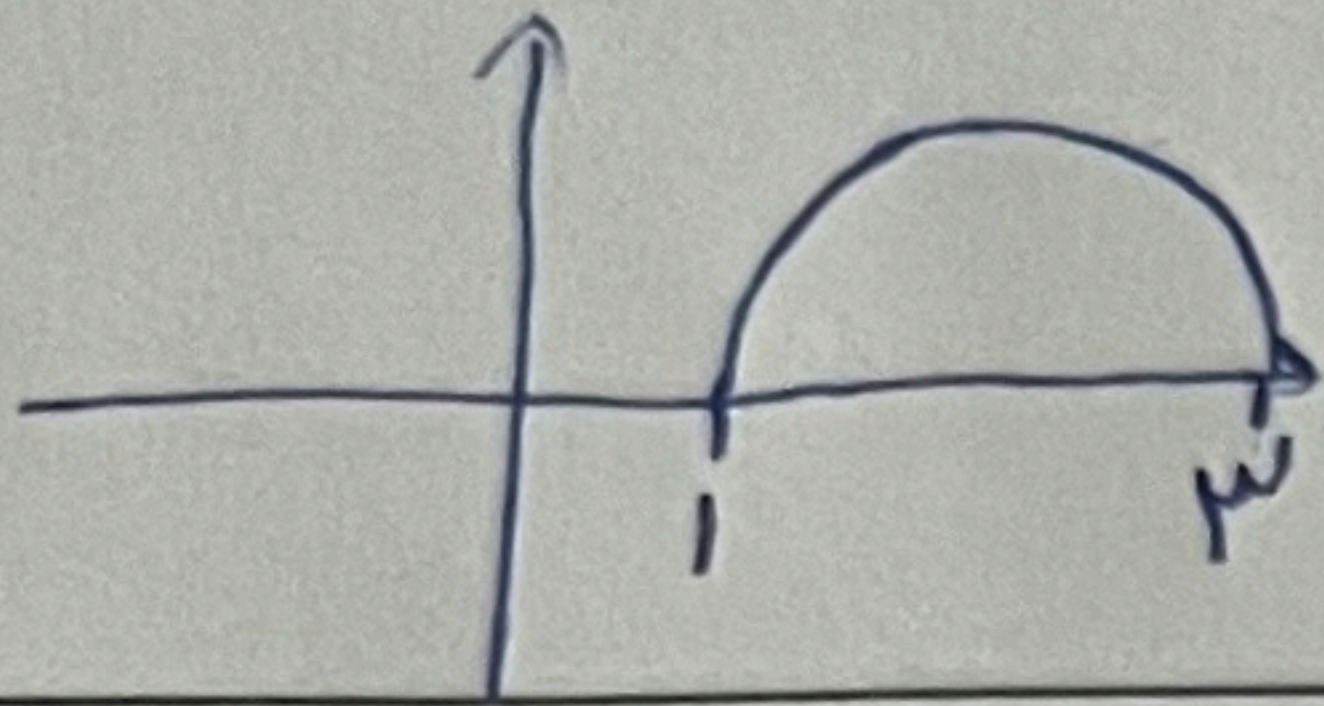


(1)

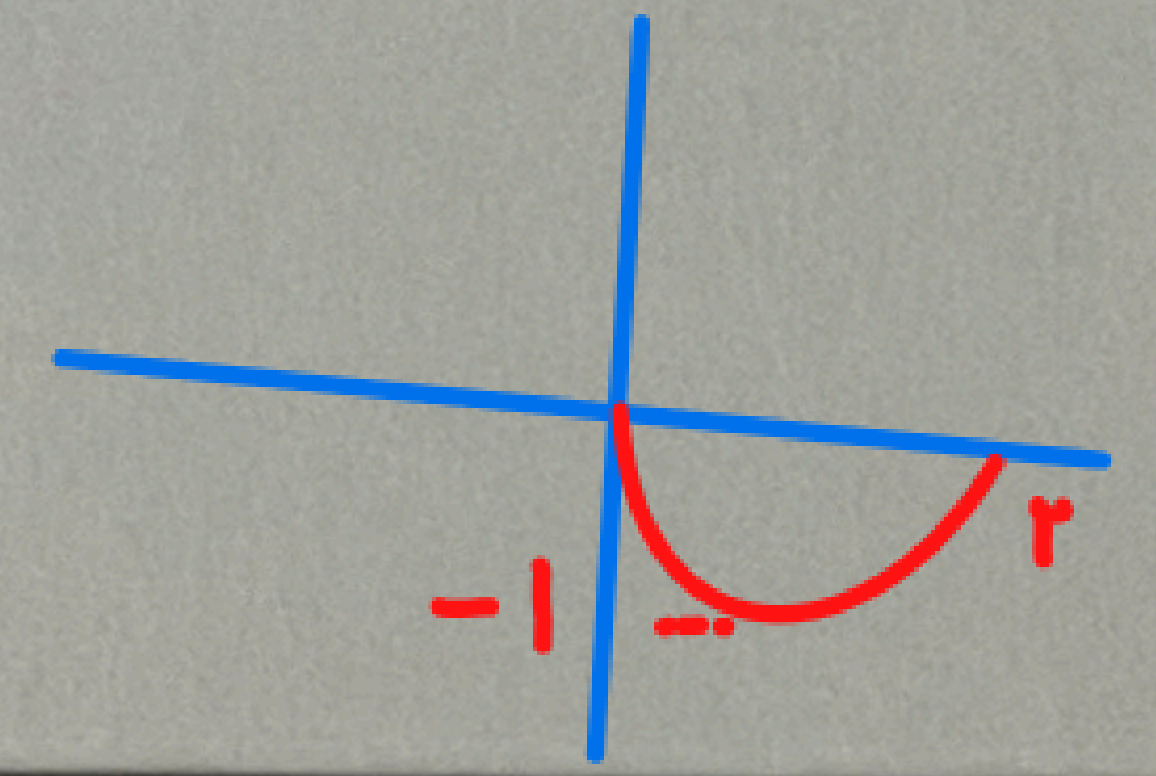
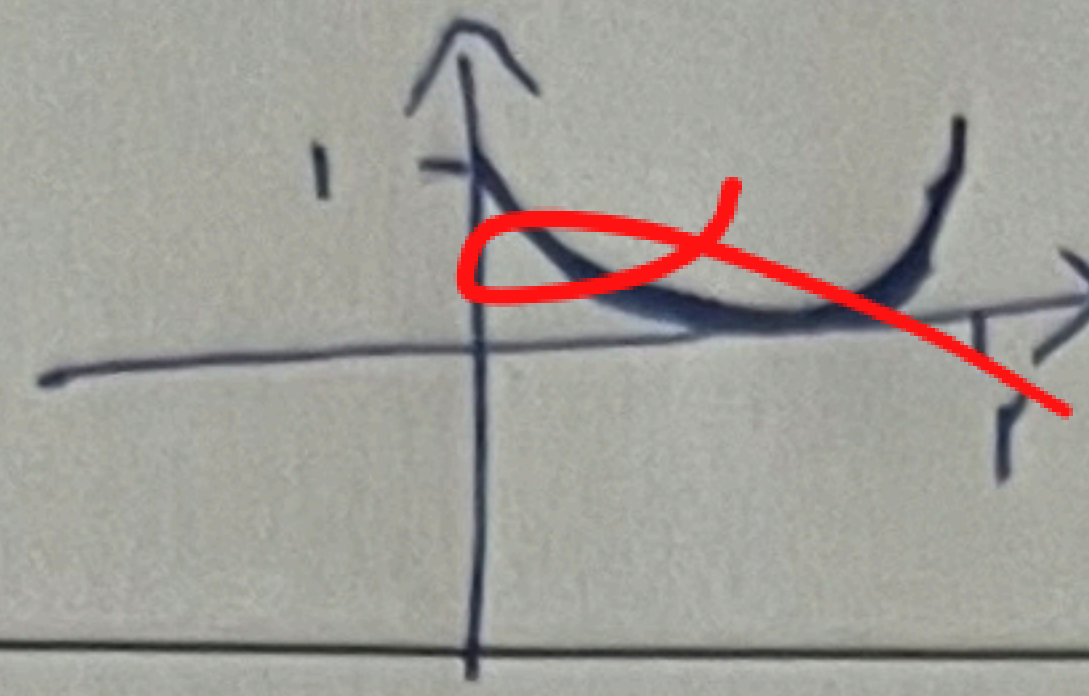
ب)



ج)

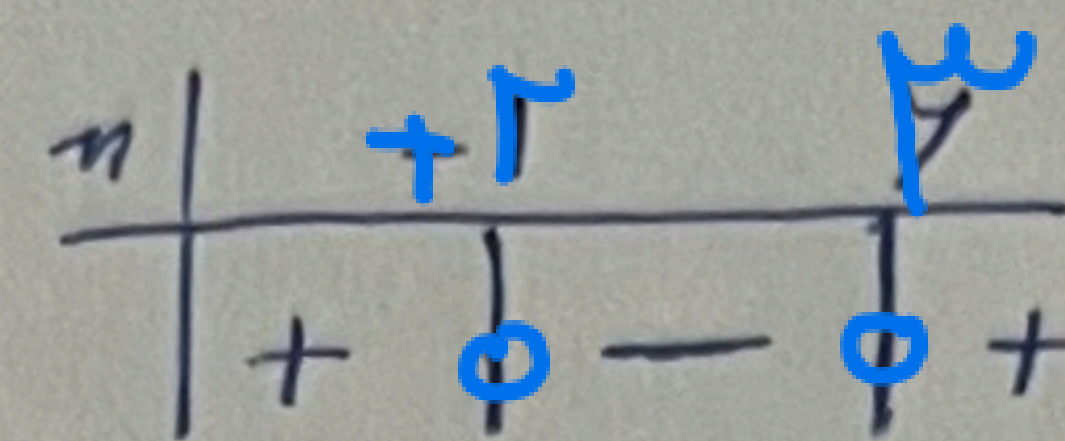


د)



الف) $n^2 - 2n + 1 > 0$

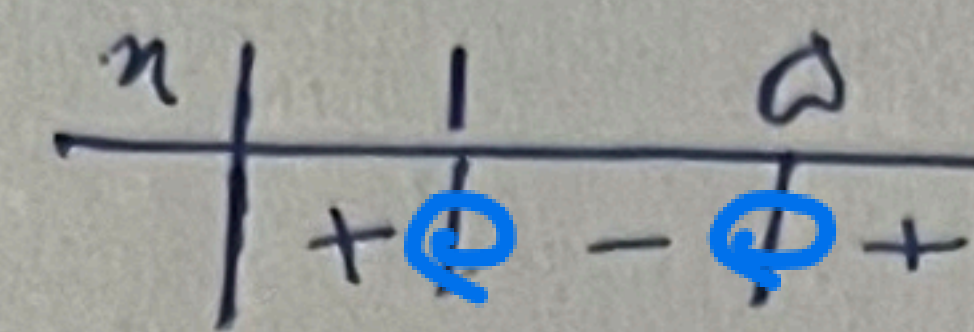
$(n+1)(n-1) > 0$
 $(n-1)(n-3)$



$(-\infty, -1) \cup (3, +\infty)$

ب) $n^2 - 2n + 1 < 0$

$(n-1)(n-1) < 0$

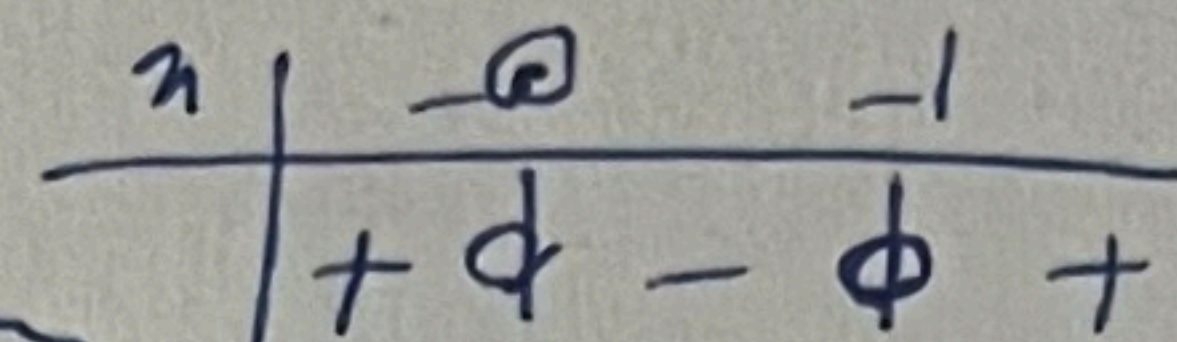


$(1, 1)$

نقص

ج) $n^2 + 2n + 1 > 0$

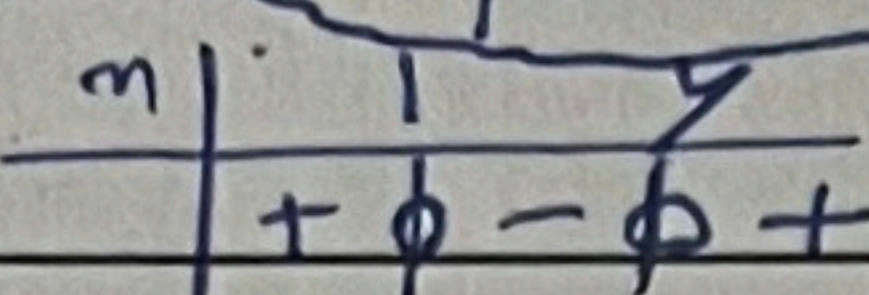
$(n+1)(n+1) > 0$



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

د) $n^2 - 2n + 1 < 0$

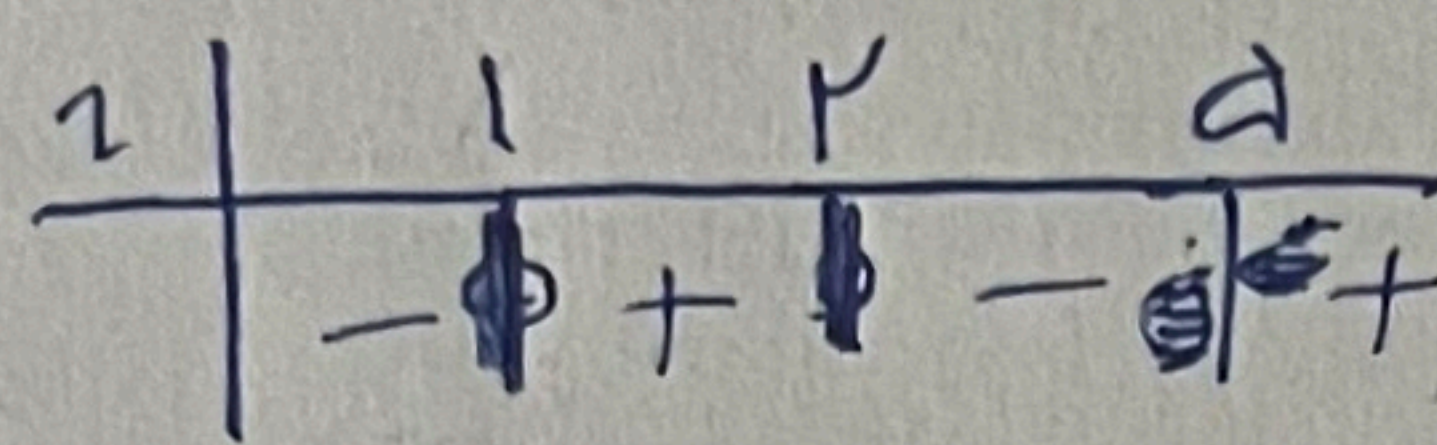
$(n+1)(n-1) < 0$



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

$[1, 1]$

الف) $\frac{n^2 - 2n + 1}{(n+1)(n-1)} < 0$
 $n - 1 \rightarrow n = 0$

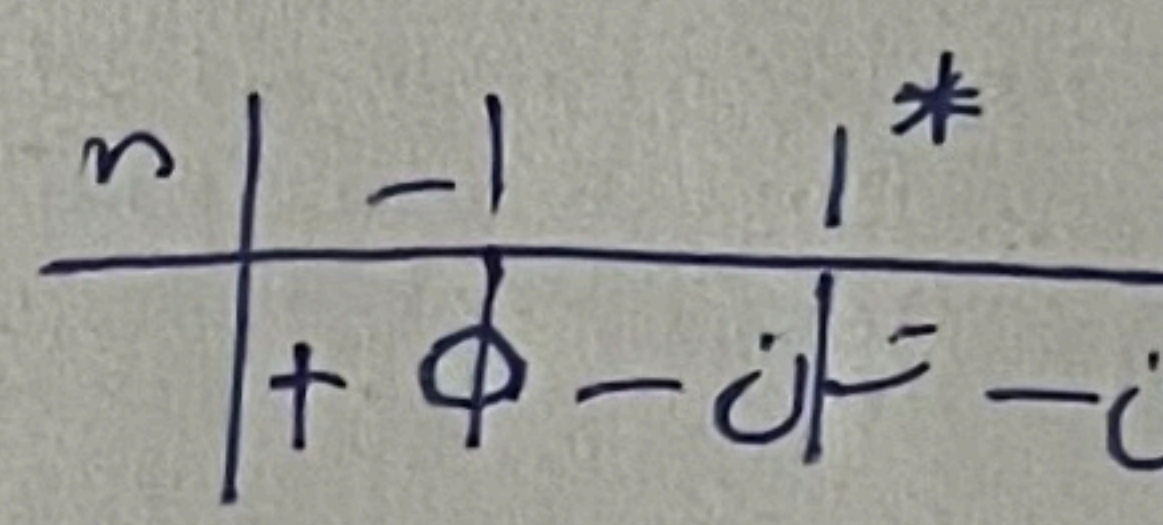


$(-\infty, -1) \cup [1, 1]$

(2) ✓

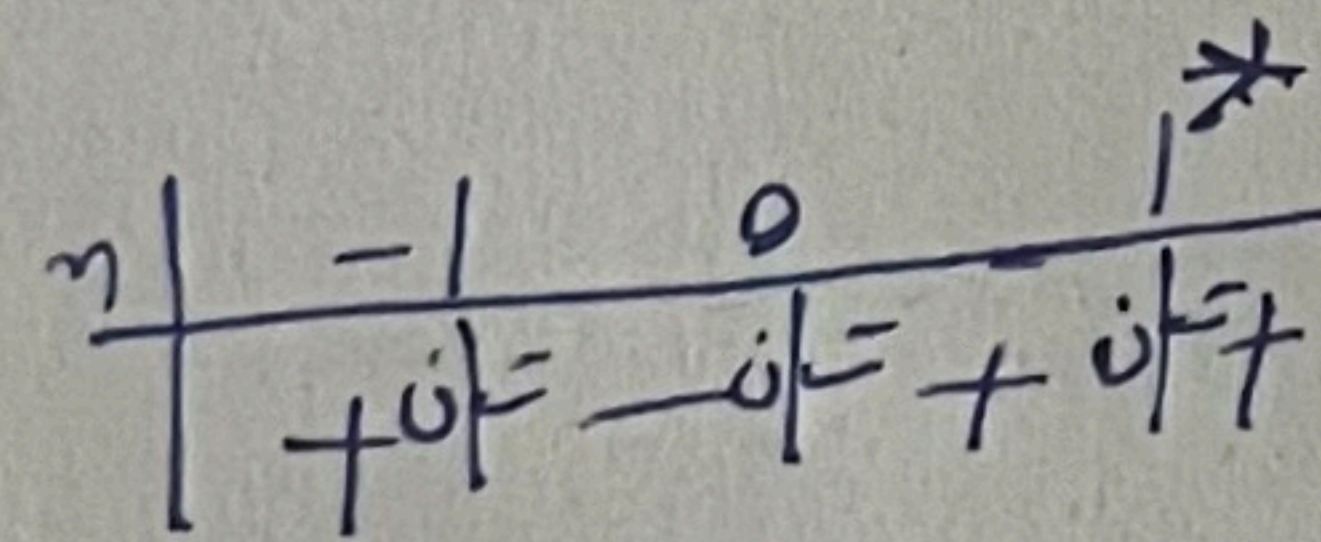
ب) $\frac{n^2 - 1}{n^2 - 2n + 1} \geq 0$

$\frac{(n-1)(n+1)}{(n-1)(n-1)} \geq 0$



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

الف) $\sqrt{\frac{n^2 - 1}{n^2 - 2n + 1}} = y$
 $n = 1$

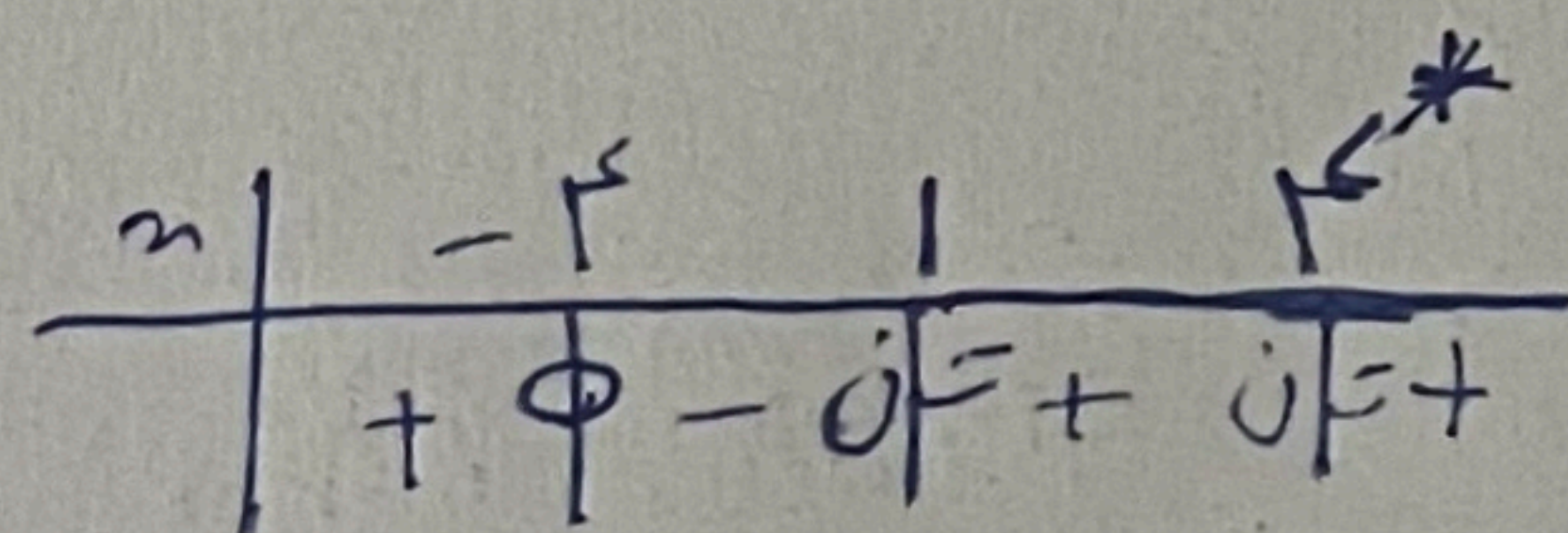


$(-\infty, -1) \cup (1, +\infty)$

$n(n^2 - 1) \Rightarrow n = \pm 1, 0$

(2) ✓

ب) $y = \sqrt{\frac{n^2 - 1}{n^2 - 2n + 1}} \Rightarrow y = \frac{(n-1)(n+1)}{(n-1)(n-1)}$



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

الف) $y = \sqrt{2 - \sqrt{2 - n}}$

$\begin{cases} 2 - n \geq 0 \Rightarrow n \leq 2 \\ 2 - \sqrt{2 - n} \geq 0 \Rightarrow \sqrt{2 - n} \leq 2 \Rightarrow 2 - n \leq 4 \Rightarrow n \geq -2 \end{cases}$

$[-2, 2]$

ب) $\sqrt{3 - \sqrt{n - 2}} = y$

$\begin{cases} n - 2 \geq 0 \Rightarrow n \geq 2 \\ 3 - \sqrt{n - 2} \geq 0 \Rightarrow \sqrt{n - 2} \leq 3 \Rightarrow n - 2 \leq 9 \Rightarrow n \leq 11 \end{cases}$

$[2, 11]$

(2) ✓

الف) $y = \sqrt{4 - 2n}$ ~~$4 - 2n \geq 0$~~ $2n \leq 4$ $n \leq 2$ $n = \pm\sqrt{2}$

ب) $y = \sqrt{2|n| - 9}$ $2|n| - 9 \geq 0$ $|n| \geq \frac{9}{2}$ $n = \pm\frac{9}{2}$ $D_f = (-\infty, -\frac{9}{2}] \cup [\frac{9}{2}, +\infty)$ $[-\sqrt{2}, \sqrt{2}]$ lib

الف) $y = \sqrt{\frac{|n|+1}{|n|-5}}$ $|n| - 5 \neq 0$ $|n| \neq 5$ $D_f = \mathbb{R} - \{\pm 5\}$

ب) $y = \sqrt{\frac{\sqrt{n}+1}{\sqrt{n}-5}}$ $\begin{cases} \sqrt{n}-5 \neq 0 & \sqrt{n} \neq 5 & n \neq 25 \\ n \geq 0 \end{cases} \Rightarrow [0, +\infty) - \{25\}$ lib

الف) $y = \frac{\sin n}{\cos n - 1}$ $\cos n - 1 \neq 0$ $\cos n \neq 1$ $D_f = \mathbb{R} - \{2k\pi\}$

ب) $y = \frac{\cos n + 1}{\sin n + 1}$ $\sin n + 1 \neq 0$ $\sin n \neq -1$ $D_f = \mathbb{R} - \{2k\pi + \frac{3\pi}{2}\}$

ج) $\begin{cases} \cot n \neq 1 \\ \sin n \neq 0 \end{cases}$ $D_f = \mathbb{R} - \{k\pi, k\pi + \frac{\pi}{2}\}$

د) $\sqrt{\sin^2 n - 5} \neq 0$ $\sin^2 n \neq \frac{5}{2}$ $\sin n \neq \pm\sqrt{\frac{5}{2}}$ $D_f = \mathbb{R} - \{k\pi \pm \frac{\pi}{4}\}$

$y = \frac{1}{\sqrt{|n-1| - \frac{1}{2}}}$ $|n-1| - \frac{1}{2} > 0$ $|n-1| > \frac{1}{2} \Rightarrow |n-1| > \frac{1}{2}$

$\frac{1}{2} < |n-1| < \frac{3}{2} \Rightarrow n > \frac{3}{2} \text{ or } n < \frac{1}{2}$ $n < \frac{1}{2} \Rightarrow n < \frac{1}{2}$

$D_f = \mathbb{R} - (\frac{1}{2}, \frac{3}{2})$ $[\frac{1}{2}, \frac{3}{2}]$ lib

الف) $y = \sqrt{5 - 2|n|}$ $5 - 2|n| \geq 0$ $|n| \leq \frac{5}{2}$ $|n| \leq \frac{5}{2}$ $D_f = [-\frac{5}{2}, \frac{5}{2}]$ lib

ب) $y = \sqrt{\frac{|n|}{|n|}}$ $\frac{|n|}{|n|} \geq 0$ $D_f = \mathbb{R} - \{0\}$