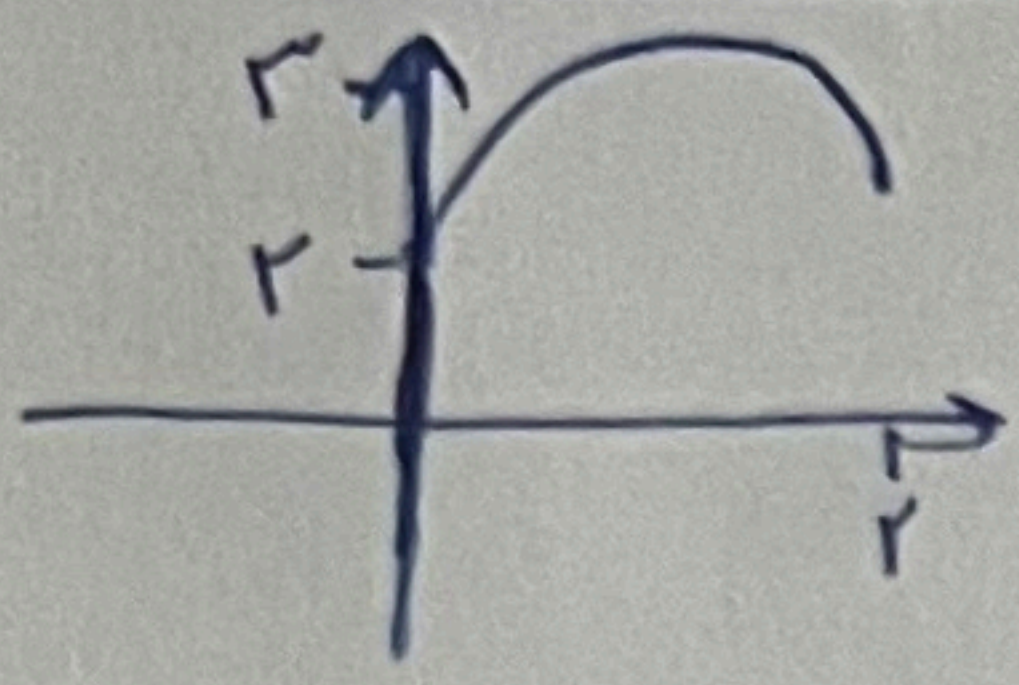
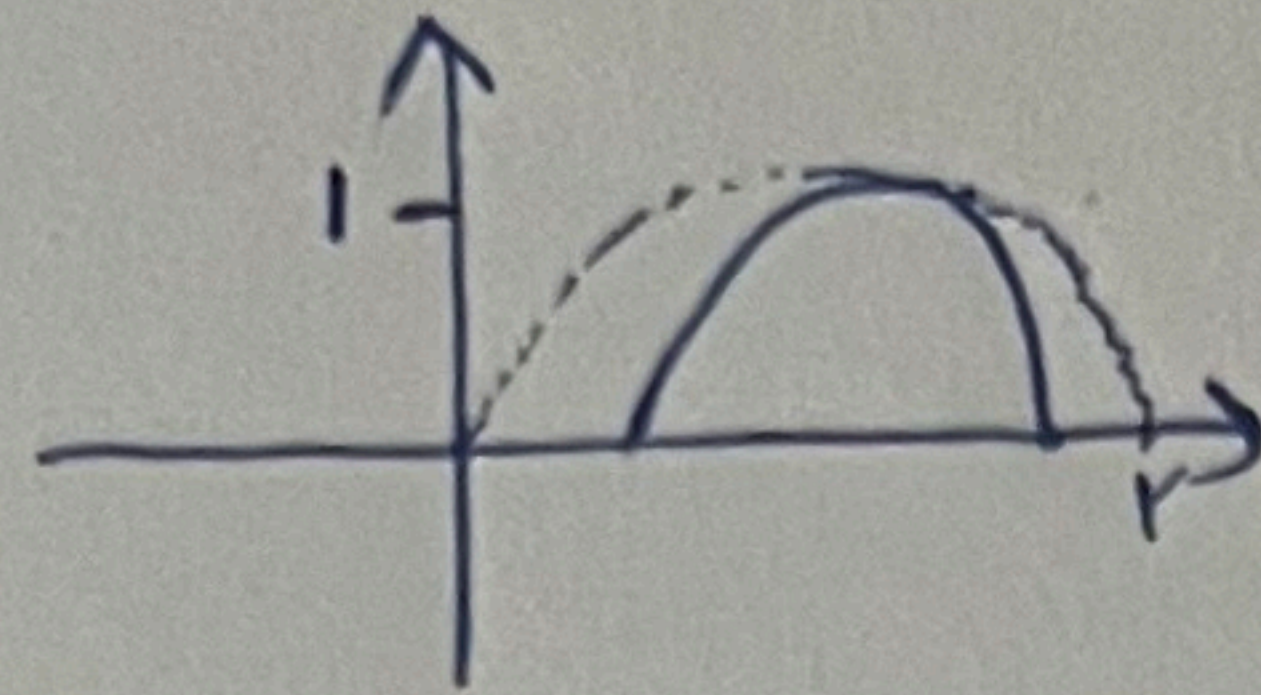


الف)

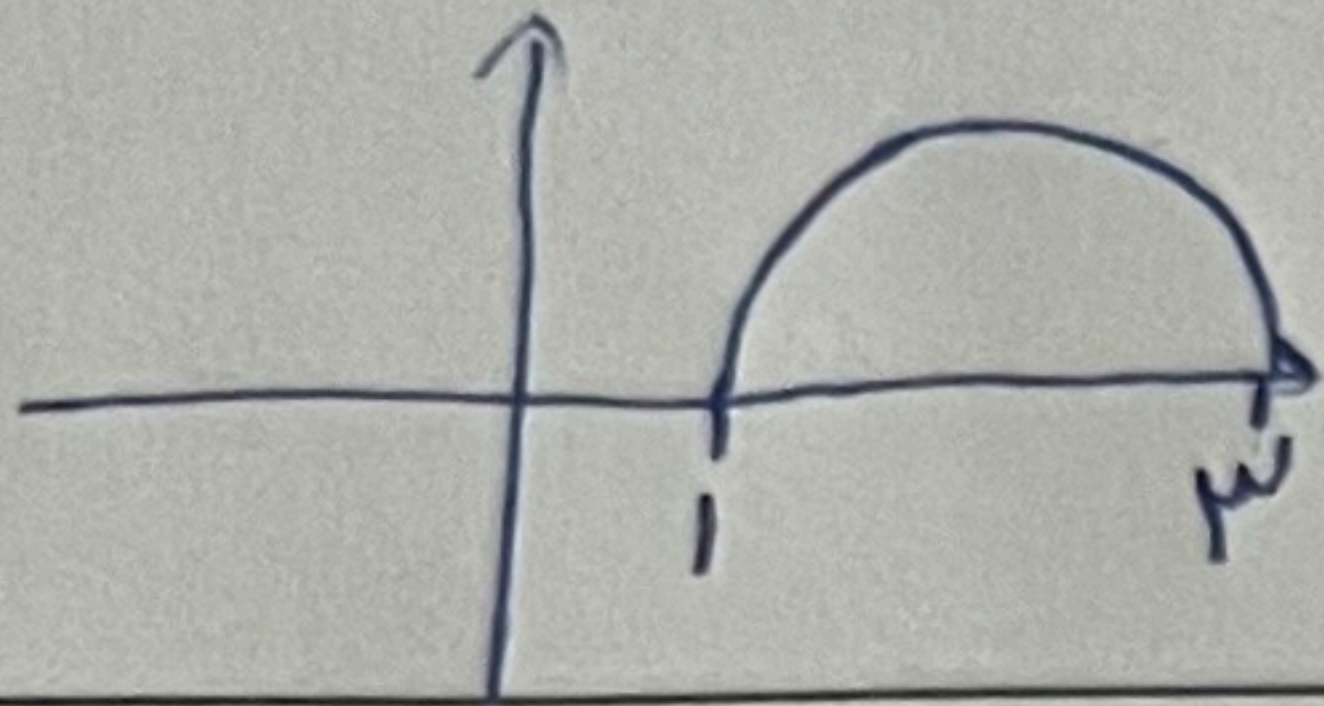


ب)

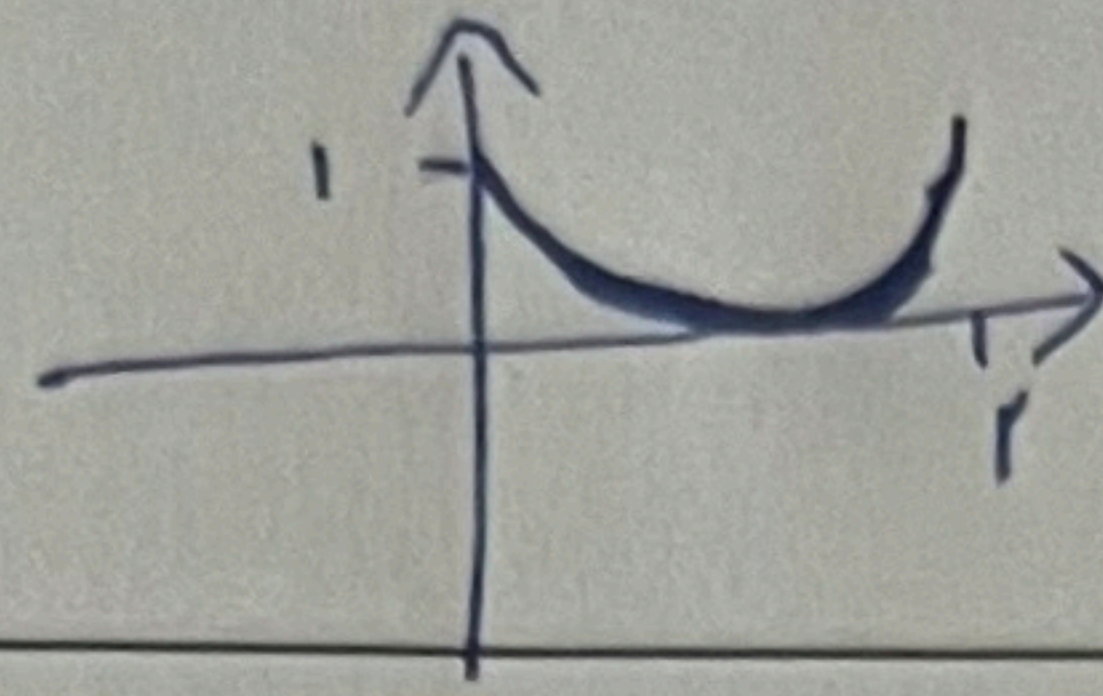


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ج)



د)



الف) $n^2 - 2n + 2 > 0$ $(n+1)(n-2) > 0$ $\frac{n}{+} \frac{-1}{+} \frac{2}{-}$ $(-\infty, -1) \cup (2, +\infty)$

ب) $n^2 - 2n + 2 < 0$ $(n-1)(n-1) < 0$ $\frac{n}{+} \frac{1}{+} \frac{2}{-}$ $(1, 2)$

ج) $n^2 + 2n + 2 > 0$ $(n+1)(n+1) > 0$ $\frac{n}{+} \frac{-1}{+} \frac{-2}{-}$ $(-\infty, -1) \cup (-1, +\infty)$

د) $n^2 - 2n + 2 < 0$ $(n+1)(n-1) < 0$ $\frac{n}{+} \frac{1}{+} \frac{2}{-}$ $(-\infty, 1) \cup (2, +\infty)$

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الف) $\frac{n^2 - 2n + 2}{(n+1)(n-1)} < 0$ $n - 1 \rightarrow n = 0$ $\frac{n}{+} \frac{1}{-} \frac{2}{+} \frac{2}{-}$ ~~$(-\infty, -1) \cup (2, +\infty)$~~
 $(-\infty, 1) \cup [2, +\infty)$

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ب) $\frac{n^2 - 1}{n^2 - 2n + 2} \geq 0$ $\frac{(n-1)(n+1)}{(n-1)(n-1)} \geq 0$ $\frac{n}{+} \frac{-1}{+} \frac{1}{-} \frac{2}{-}$ $(-\infty, -1] \cup [2, +\infty)$

الف) $\sqrt{\frac{n^2 - 1}{n^2 - 2n + 2}} = y$ $n = 1$ $\frac{n}{+} \frac{-1}{+} \frac{0}{-} \frac{2}{-}$ $(-\infty, -1) \cup (0, 1) \cup (1, +\infty)$

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

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

الف) $y = \sqrt{2 - \sqrt{2 - n}}$ $\begin{cases} 2 - n \geq 0 \Rightarrow n \leq 2 \\ 2 - \sqrt{2 - n} \geq 0 \Rightarrow \sqrt{2 - n} \leq 2 \Rightarrow 2 - n \leq 4 \Rightarrow n \geq -2 \end{cases}$ $\frac{n}{+} \frac{-1}{+} \frac{2}{-}$ ~~$[-1, 2]$~~

ب) $\sqrt{3 - \sqrt{n - 2}} = y$ $\begin{cases} n - 2 \geq 0 \Rightarrow n \geq 2 \\ 3 - \sqrt{n - 2} \geq 0 \Rightarrow \sqrt{n - 2} \leq 3 \Rightarrow n - 2 \leq 9 \Rightarrow n \leq 11 \end{cases}$ $\frac{n}{+} \frac{-1}{+} \frac{2}{-}$ $[2, 11]$

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

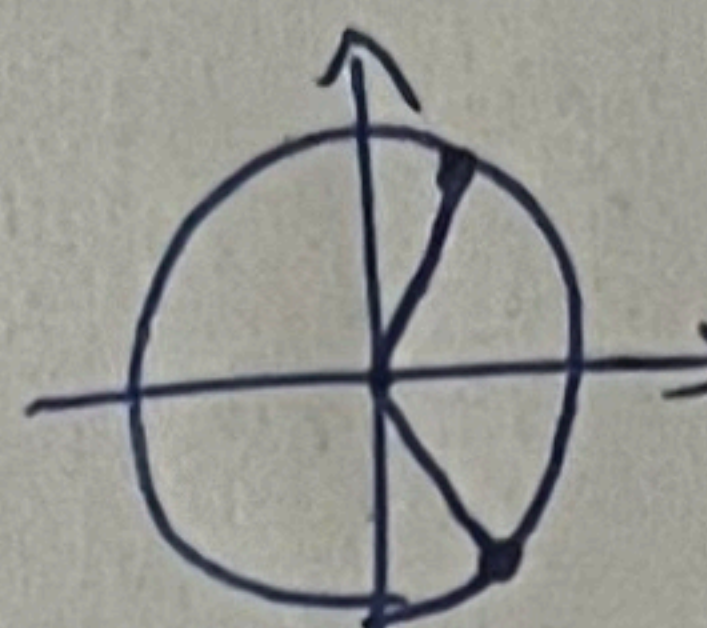
$\rightarrow$ $\begin{array}{c|cc} n & -\sqrt{2} & \sqrt{2} \\ \hline & + & - \end{array}$ $D_f = (-\infty, -\sqrt{2}] \cup [\sqrt{2}, +\infty)$

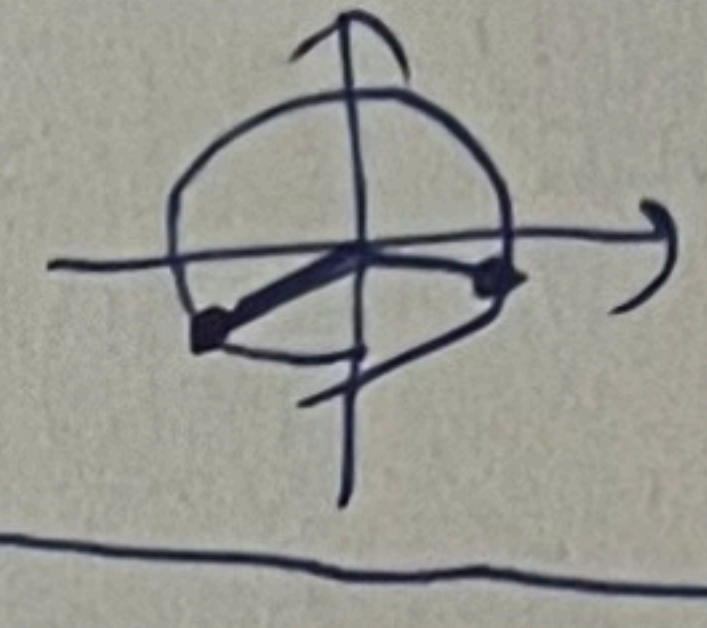
ب) $y = \sqrt{2|n| - 9}$ $2|n| - 9 \geq 0$ $2|n| \geq 9$ $|n| \geq \frac{9}{2}$ $n = \pm\frac{9}{2}$

$\begin{array}{c|cc} n & -\frac{9}{2} & \frac{9}{2} \\ \hline & + & - \end{array}$ $D_f = (-\infty, -\frac{9}{2}] \cup [\frac{9}{2}, +\infty)$

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

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

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

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

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

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

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

$|n-1| > \frac{1}{2} \Rightarrow n > \frac{3}{2}$ $n+1 > \frac{1}{2} \Rightarrow n > -\frac{1}{2}$ $n < \frac{1}{2} \Rightarrow n < \frac{1}{2}$ $\Rightarrow \begin{cases} n > \frac{3}{2} \\ n < -\frac{1}{2} \end{cases}$

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

الف) $y = \sqrt{5 - 2|n|}$ $5 - 2|n| \geq 0$ $2|n| \leq 5$ $|n| \leq \frac{5}{2}$ $\Rightarrow -\frac{5}{2} \leq n \leq \frac{5}{2}$

$D_f = [-\frac{5}{2}, \frac{5}{2}]$

ب) $y = \sqrt{\frac{|n|}{|n|}}$ $\frac{|n|}{|n|} \geq 0$ $\begin{matrix} \oplus \checkmark \\ \odot \alpha \\ \ominus \checkmark \end{matrix}$ $D_f = \mathbb{R} - \{0\}$