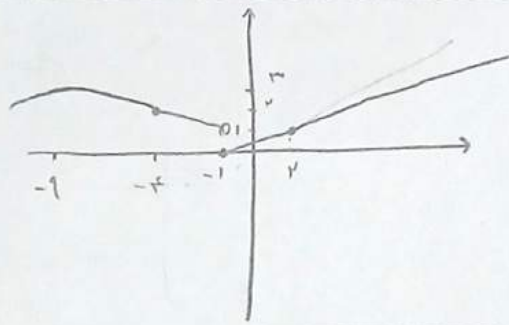
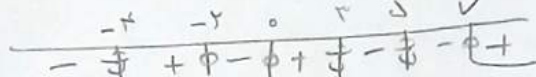




با توجه به شکل تابع هست

$$g(n) = \sqrt{\frac{n f(n-2)}{f(n)}}$$

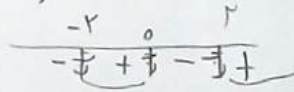


$$D_g : (-1, -1/2) \cup [0, 1/2) \cup [1, +\infty)$$

الف) $n^2 - 4 \neq 0$
 $n(n^2 - 4) \neq 0 \rightarrow n \neq 0$
 $n \neq 2$
 $n \neq -2$

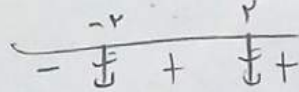
$$D_f : \mathbb{R} - \{-2, 0, 2\}$$

ب) $g(n) = \sqrt{\frac{n^2 - 3n + 2}{n^2 - 4}}$
 Δ صورت منفی نیست
 $n(n^2 - 4)$
 $n \neq 2$
 $n \neq -2$



$$D_g : (-2, 0) \cup (2, +\infty)$$

الف) $y = \sqrt{\frac{n-2}{n^2-2n^2-1}} \rightarrow n=2$
 $n^2 = -2$ و $n^2 = 4$
 $n^2 = 4 \rightarrow n = \pm 2$
 $n = 2$ و $n = -2$



$$D_g : (-2, +\infty) - \{2\}$$

ب) $y = \frac{n^2+1}{n^2-2[-n]}$
 $n \neq 2[-n] \rightarrow [-n] \neq 2 \rightarrow$
 $-n \neq [2, 2]$
 $n \neq [-2, -2]$

$$D_f : \mathbb{R} - [-2, 2]$$

الف) $\sqrt{n(n^2-1)}$
 $\sqrt{|n|+n}$
 $\begin{cases} \sqrt{2n} & n \geq 0 \\ n & n \leq 0 \end{cases}$

$$D_f : [1, +\infty)$$

ب) $\sqrt{|n-1|-n^2}$
 $|n-1|-n^2 \geq 0$
 $|n-1| \geq n^2$
 $|n| \leq 1$
 $n \neq \pm 1$

$$D_f : [-2, -1) \cup (-1, 1)$$

$$u) y = \sqrt{(n-1)(n-2)}$$

6

$$\begin{array}{c} 2 \quad 2 \\ + \quad + \\ 0 \quad 0 \end{array}$$

$$D_f: \mathbb{R}$$

$$y = \sqrt{|n-1|} [n-2]$$

$$\begin{array}{c} 1 \quad 2 \quad 2 \\ + \quad - \quad + \\ 0 \quad 0 \end{array}$$

$$(-\infty, 1] \cup [2, +\infty)$$

✓

$$|n-2|-1-k \neq 0 \quad k > 0$$

$$|n-2|-1 \neq k$$

$$|n-2| \neq k+1$$

$$n-2 \neq k+1 \rightarrow n \neq k+3$$

$$n-2 \neq -k-1 \rightarrow n \neq -k+1$$

و $k+1$ و $1-k$ اینها صفر باشند چون $k < 0$ پس $k+1 < 0$

$$k=1 \rightarrow 0 = 1-k$$

$$|n-2|-1 \neq -k$$

$$|n-2| \neq -k+1$$

$$n-2 \neq -k+1 \rightarrow n \neq -k+3$$

$$n-2 \neq k-1 \rightarrow n \neq k+1$$

جواب آخر

✓

$$f(n) = \frac{\frac{n^2 + n + 2}{n^2 + n + 2}}{\frac{n+1}{n-1}} \sim \frac{(n+1)(n+2)}{(n+1)} \Rightarrow$$

$$-1, -2, 1$$

$$n=2$$

$$n^2 - 4n + 2 = 0 \rightarrow \Delta = 16 - 4(2) = 12$$

دارا دو ریشه حقیقی است

✓

$$y = \frac{1}{n+1} \sim \frac{1}{n} \quad n \neq 1, n > 0$$

$$\frac{1}{n} > 0 \rightarrow 0 < n < 1$$

$$D_f: (0, 1)$$

$$n+1 \neq 0, n > 0$$

$$n \neq -1$$

$$n > 1$$

✓

$$-\frac{1}{\sqrt{n}} \leq \frac{1}{\sqrt{n}} \leq \frac{1}{\sqrt{n}} \rightarrow \frac{1}{\sqrt{n}} \leq \frac{1}{\sqrt{n}} \rightarrow \frac{1}{\sqrt{n}} \leq \frac{1}{\sqrt{n}}$$

$$\Rightarrow -\frac{1}{\sqrt{n}} \leq \frac{1}{\sqrt{n}} \rightarrow D_f: \left[-\frac{1}{\sqrt{n}}, \frac{1}{\sqrt{n}}\right]$$

✓