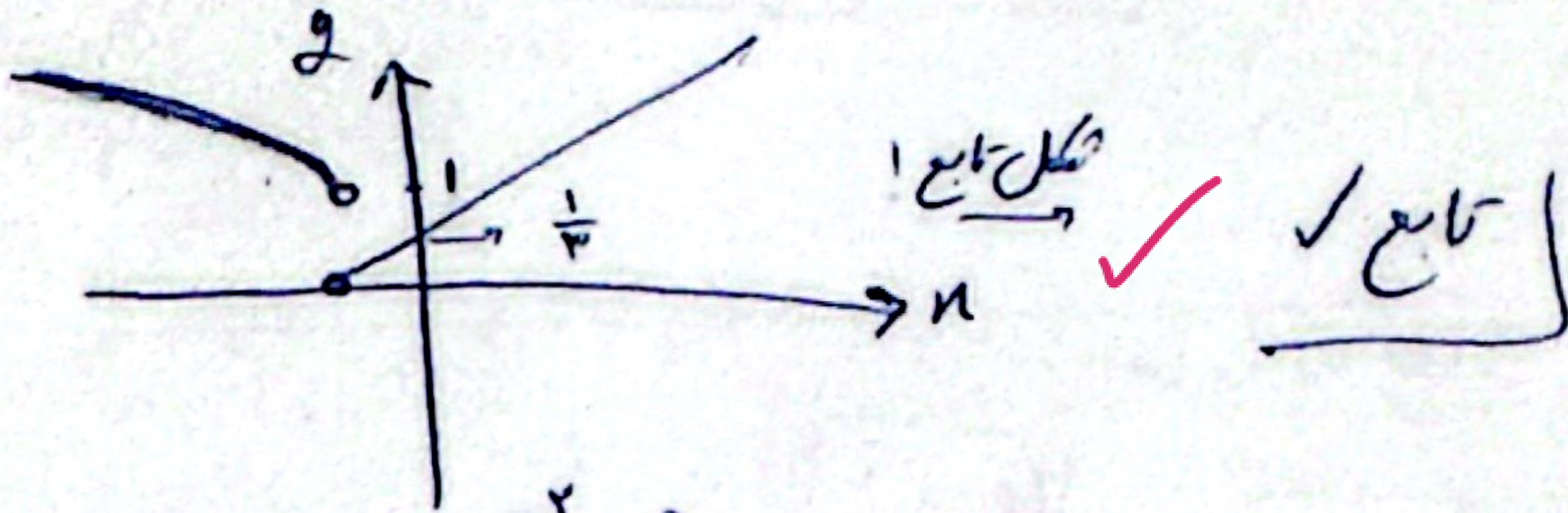


نام و نام خانوادگی آریه پاسخنامه تشریحی تکلیف شماره ۲ کلاس جزایر هم سیر ۲۰

$$x = \begin{cases} 3y-1 & y \geq 0 \\ -y^2 & y > 1 \end{cases} \rightarrow \begin{cases} \frac{x+1}{3} = y & y \geq 0 \\ \sqrt{-x} = y & y > 1 \end{cases}$$

$x \geq -1$
 $x < -1$



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

$-4 \quad 3 \quad 5$

$$\begin{array}{c} -4 \quad -2 \quad 0 \quad 2 \quad 4 \quad \checkmark \\ - \quad + \quad - \quad + \quad - \quad + \end{array}$$

$$D_g = (-4, -2] \cup [0, 3) \cup [7, +\infty)$$

فقط خواست باشد که $n=4$ در دایره $f(n)$ و $n=2$ در دایره $f(n-2)$ نیست که به بزرگ است آفده نیست

$$a) D_f = \mathbb{R} - \{-2, 2, 0\}$$

$$f(n) = \frac{2n^2 - 3n + 2}{n^3 - 6n}$$

$$b) D = (-2, 0) \cup (2, +\infty)$$

$$\sqrt{\frac{2n^2 - 3n + 2}{n^3 - 6n}}$$

$0 \quad 2 \quad 4$
 $- \quad + \quad - \quad +$

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

$n^2 - 2n^2 - 1$
 $n^2 - 2n^2 - 1$
 $n^2 - 2n^2 - 1$
 $n^2 - 2n^2 - 1$

$$\begin{array}{c} -2 \quad 2 \\ - \quad + \quad - \quad + \end{array} \rightarrow D_f = (-2, +\infty) - \{2\}$$

$$b) y = \frac{2n^2 + 1}{n^2 - 2[-n]} \rightarrow [-n] \times 2$$

$$D_f = \mathbb{R} - \frac{2 \leq -n < 2}{-2 < n \leq -2}$$

$$\rightarrow D_f = \mathbb{R} - (-2, -2]$$

$$a) f(n) = \frac{\sqrt{n(n^2-1)}}{\sqrt{|n|+n}}$$

$$\begin{array}{l} n > 0 \\ n > 0 \end{array} \rightarrow \frac{n}{n} \rightarrow 1$$

$$\begin{array}{c} -1 \quad 0 \quad 1 \\ - \quad + \quad - \quad + \end{array} \rightarrow \mathbb{R} \setminus \{1\}$$

$$b) f(n) = \frac{\sqrt{|n-2|-n^2}}{|n|-1}$$

$n \neq \pm 1$

$$|n-2|-n^2 \geq 0 \rightarrow n-2-n^2 \geq 0 \rightarrow -n^2+n-2 \geq 0$$

①

$$\begin{array}{l} n^2+n-2 \leq 0 \\ n^2+n-1 \leq 0 \end{array}$$

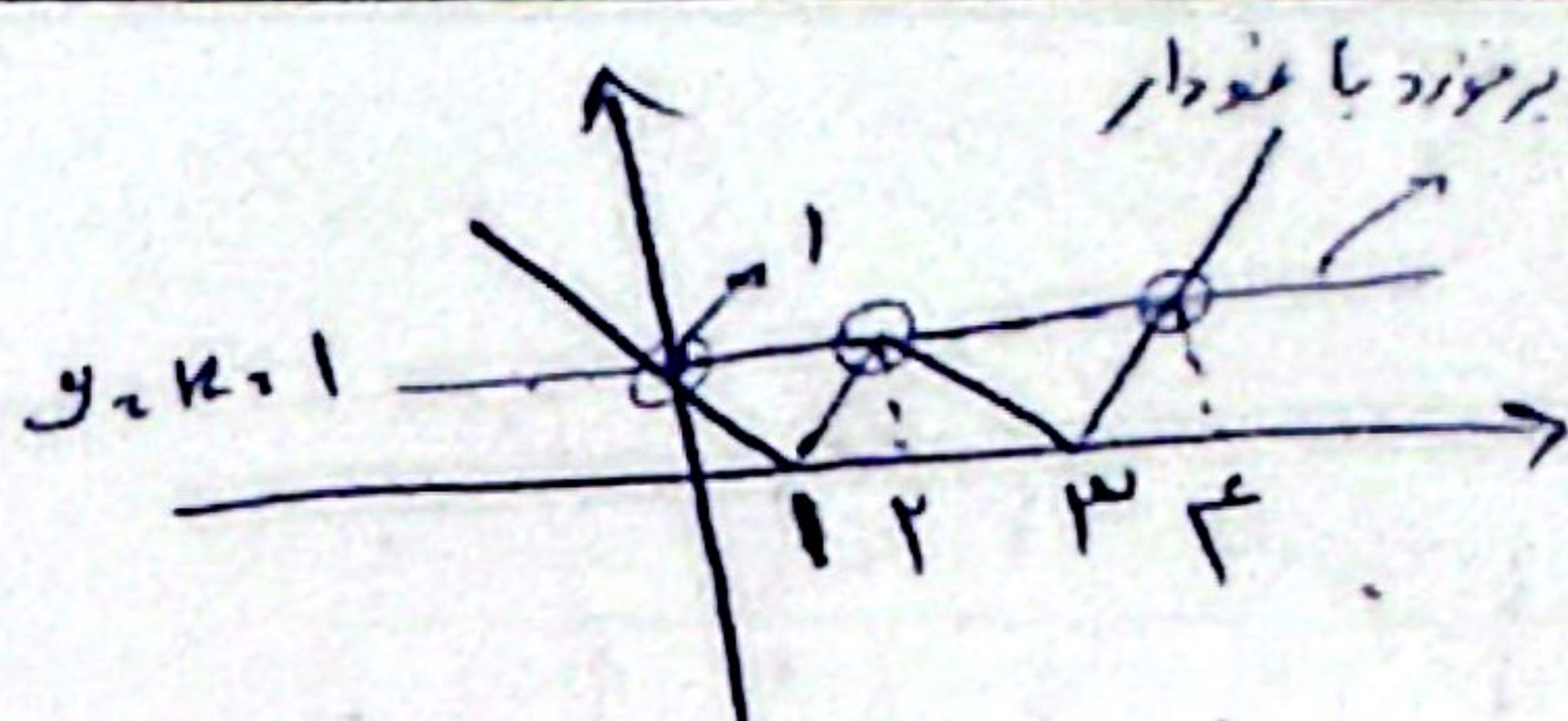
$$\begin{array}{c} -2 \quad 1 \\ - \quad + \quad - \quad + \end{array} \rightarrow D_f = [-2, 1) - \{1\}$$

$$الف) \quad y = \sqrt{(n-2)[n-3]} \quad \begin{matrix} 2 & 3 \\ + & 0 & + & + \\ 1 & & & \end{matrix} \rightarrow D_f = \mathbb{R} \quad \checkmark$$

$$ب) \quad y = \sqrt{|n-1|[n-3]} \quad \begin{matrix} 1 & 3 & 4 \\ - & 0 & + & + \\ 1 & & & \end{matrix} \rightarrow D_f = [3, +\infty) \cup \{1\} \quad \checkmark$$

$$y = \frac{1}{| |n-2| - 1 | - k}$$

$| |n-2| - 1 | = k$
 $|n-2| = k+1$
 $n = 2 \pm (k+1)$
 $n = 3, 1, 0$



$$k=1 \quad \checkmark$$

$$f(n) = \frac{n^2 + 3n + 2}{(n^2 + 3n + 2)(n+1)(n-1)} \rightarrow n \neq (-2, -1, 1) \rightarrow \text{مخرج } n \neq -2, -1, 1 \quad \checkmark$$

$$n^2 - 9n + 9 = 0 \rightarrow (n-3)^2 = 0 \rightarrow n=3 \rightarrow \text{یک ریشه یکتا} \quad \checkmark$$

$$g = \frac{1}{n+1} \lg \frac{1}{n}$$

$$n+1 > 0 \rightarrow n > -1$$

$$n > 0$$

$$n \neq 0$$

$$n \neq 1$$

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

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

$$\rightarrow D_f = (0, 1) \quad \checkmark$$

$$D_f = [-\infty, 3] \rightarrow -\infty \leq n \leq 3$$

$$f(3n^2-1) \rightarrow \begin{matrix} -\infty < 3n^2-1 \leq 3 \\ \downarrow \\ 3n^2-1 \leq 3 \end{matrix} \rightarrow n^2 \leq \frac{4}{3}$$

$$-\frac{2}{\sqrt{3}} \leq n \leq \frac{2}{\sqrt{3}}$$

$$D_{f(3n^2-1)} = \left[-\frac{2}{\sqrt{3}}, \frac{2}{\sqrt{3}}\right] \quad \checkmark$$