

نام و نام خانوادگی: فرزاد شیرازی پاسخنامه تشریحی تکلیف شماره ۱... کلاس: دوازدهم ... A

الف) $y^r - 2x^r = 2n-1 \rightarrow y^r = 2m^r + 2n-1$
 تعريف $y_1^r = 2m_1^r + 2n_1 - 1 \xrightarrow{n=1} y_1^r = y^r \rightarrow y_1 = y \rightarrow \sqrt{\text{جواب}}$
 باقی $y_2^r = 2m_2^r + 2n_2 - 1 \rightarrow y_2^r = y^r \rightarrow y_2 = y \rightarrow \sqrt{\text{جواب}}$

ب) $x \cos y = y \cos x$
 مثال نقیض $\rightarrow x = \frac{\pi}{r} \rightarrow \frac{\pi}{r} \cos y = y \cos \frac{\pi}{r} \rightarrow \frac{\pi}{r} \cos y = 0 \rightarrow x y^r + 2n - y^r - 2y = 0$
 $\rightarrow y = \frac{\pi}{r}, \frac{2\pi}{r}, \dots = \text{جواب}$ (X) ✓

ج) $\frac{x+y}{r} = \sqrt{xy} \rightarrow x+y = r\sqrt{xy}$ (2)
 $\rightarrow x+y - r\sqrt{xy} = 0 \rightarrow (\sqrt{x} - \sqrt{y})^2 = 0$
 $\rightarrow \sqrt{x} = \sqrt{y} \rightarrow x = y$ ✓
 د) $x y^r + 2n - y^r - 2y = 0$
 $\rightarrow x y^r + 2n - y^r - 2y = 0 \rightarrow x y^r + 2n - y^r - 2y = 0$
 $\rightarrow x = y \rightarrow \text{جواب}$ ✓

$|y| + x^2 = 2y \rightarrow x^2, 2y - |y| \xrightarrow{y \geq 0} x^2, y \rightarrow x, \sqrt{y}$
 $\xrightarrow{y < 0} x^2, 2y \rightarrow$ تعریف نشده
 $f \rightarrow$ تابع هست ✓
 (ب) $[y] + [x] = 1$ مثال نقض $x=0$ $[y] = 1 \rightarrow y = \begin{matrix} 1,1 \\ 1,2 \\ 1,3 \\ \vdots \end{matrix}$ تابع نیست ✓

$$f(n) = \begin{cases} r_n^r - b & n \geq r \\ a + r_n & 0 \leq n \leq c \\ r_n^r - b & n \leq -1 \end{cases} \rightarrow \text{if } r \rightarrow f(r) = a + r = 11 - b$$

$$f(m) = \sqrt{a - bm - n^2} \quad [a, b] \rightarrow \frac{a, b}{\text{---}}, \quad (r)$$

$$\frac{f_1}{f_2} = \frac{c}{a} \Rightarrow \frac{a}{-1} = -a = ab \rightarrow \boxed{b = -1} \quad \left\{ \begin{array}{l} a+b = 2-1=1 \end{array} \right. \quad (r)$$

$$\frac{f_2}{f_2} = -\frac{b}{a} \Rightarrow -\frac{b}{-1} = -b = a+b \xrightarrow{b=-1} 1 = a-1 \rightarrow \boxed{a=2} \quad (r)$$

$$\frac{r}{\sqrt{am^r + bm + c}}$$

$$\rightarrow r_a + c - r|b| = 0 \xrightarrow{b < 0} r_a - r b + r b = b \quad \checkmark$$

$$y = \sqrt{\frac{r_m + r}{n + b}} + a \quad (r + \infty)$$

۲ باز است ← ریشه مجزب

$$b = -r$$

$$\rightarrow y = \sqrt{\frac{r_m + r}{n - r}} + a \rightarrow y = \sqrt{\frac{r_m + r + a n - r a}{n - r}} \rightarrow \sqrt{\frac{(r + a)n + r - r a}{n - r}} \rightarrow a = -r$$

فقط یک دارد
دارد

$$الف) y = \sqrt{x^2 - n} \rightarrow x^2 - n \geq 0 \rightarrow n^2 (n - 1)(n + 1) > 0$$

$$\frac{-1}{-1} + \frac{0}{0} + \frac{1}{1} + \rightarrow [-1 \ 0] \cup [1 + \infty) \checkmark$$

$$ب) y = \frac{1}{\sqrt{|n| - 1}} \rightarrow |n| - 1 > 0 \rightarrow |n| > 1 \rightarrow n > 1 \text{ or } n < -1$$

$$D = (-\infty -1) \cup (1 + \infty) \checkmark$$

$$الف) y = \sqrt{\frac{1}{|n| - [n]}} \rightarrow |n| - [n] \neq 0 \rightarrow |n| \neq [n]$$

$$D = \mathbb{R} - \mathbb{Z}$$

$$x \in \mathbb{R} - \mathbb{Z}^+ - \{0\} \checkmark \leftarrow x \notin \mathbb{Z}^+ - \{0\}$$

$$ب) \sqrt{x} + \sqrt{2} = 9 \rightarrow 0 \leq x \leq 11 \checkmark$$

$$y = \sqrt{\frac{1}{r \left[r_m - \frac{1}{r} \right] + \left[r_m + \frac{c}{r} \right]}} \rightarrow y = \sqrt{\frac{1}{r \left[r_m - \frac{1}{r} \right] + r}}$$

$$r \left[r_m - \frac{1}{r} \right] + r > 0 \rightarrow \left[r_m - \frac{1}{r} \right] > -1 \rightarrow r_m - \frac{1}{r} \geq 0 \rightarrow n \geq \frac{1}{r} \checkmark$$

$$\sqrt{1 - \lg(r_m - a)}$$

$$I) r_m - a > 0 \rightarrow n > \frac{a}{r} \rightarrow b = \frac{a}{r}$$

$$II) 1 - \lg(r_m - a) > 0 \rightarrow 1 > \lg(r_m - a) \rightarrow 10 > r_m - a \rightarrow \frac{10 + a}{r}$$

$$\rightarrow \frac{10 + a}{r} = c \rightarrow c - b = \frac{10 + a}{r} - \frac{a}{r} = \frac{10}{r} \checkmark$$