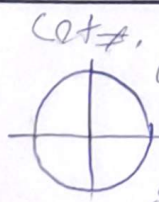
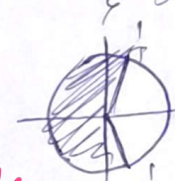
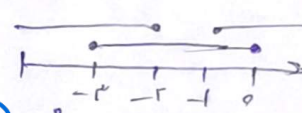


نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۱۳ کلاس یازدهم A	لايه حل هاي نه نواقص در صفاات آخربا نيت مطالعه رور!	نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۱۳ کلاس یازدهم A
$y_2 = \frac{x+3}{2x^3+2x^2-11x+3}$ $\Rightarrow R = \left\{1, \frac{1}{2}, -\frac{1}{2}\right\}$ $y_2 = \frac{x+3}{2x^3+2x^2-11x+3}$ $\Rightarrow R = \left\{-1, -\frac{1}{2}, -3\right\}$	$2x^3+2x^2-11x+3 \mid x-1 \rightarrow \frac{x-1}{2x^2+0x-3} \rightarrow (x-1)(x-3)(2x+1)$ $2x^3+2x^2-11x+3 \mid x+3 \rightarrow \frac{x+3}{2x^2+0x-3} \rightarrow (x+1)(x-3)(2x+1)$ $\Rightarrow R = \left\{-1, -\frac{1}{2}, -3\right\}$	۱
$y_2 = \frac{2x^3}{x^3-2x^2+x-1}$ $\Rightarrow R = \left\{1\right\}$ $y_2 = \sqrt{\frac{2x^3}{x^3-2x^2+x-1}}$ $\Rightarrow R = \left\{1\right\}$	$x^3-2x^2+x-1 \mid x-1 \rightarrow \frac{x-1}{x^2-x+1} \rightarrow 1-f(x) \in \mathbb{Z}$ $\Rightarrow R = \left\{1\right\}$ چرا عبارت! قیمن علامت ندری :: $x^3-2x^2+x-1 = (x-1)(x^2-x+1) \geq 0$ $x^2-x+1 \geq 0 \rightarrow x-1 \geq 0 \rightarrow x \geq 1 \rightarrow [1, +\infty)$	۲
$y_2 = \frac{2}{x^2-5 x-1 -2x+1}$ $\Rightarrow R = \left\{-3, 1, 0\right\}$	$x^2-5 x-1 -2x+1 \mid x-1 \rightarrow \frac{x-1}{x^2-5 x-1 -2x+1} \rightarrow (x-1)(x-1) \neq 0$ $x-1 \neq 1 \rightarrow x \neq 0, 2 \Rightarrow R = \left\{-3, 1, 0\right\}$	۳
$y_2 = \sqrt{[a]-2}$ $\Rightarrow R = \left\{-1, 0\right\} \cup (1, 3)$	$[a]-2 \geq 0 \rightarrow [a] \geq 2 \rightarrow a \geq -2$ $\Rightarrow R = \left\{-1, 0\right\} \cup (1, 3)$	۴
$y_2 = \sqrt{[a] + [-a]}$ $\Rightarrow R = \mathbb{Z}$	$[a] + [-a] \geq 0 \rightarrow D = \mathbb{Z}$ بنایه عدد غیر صحیح! از برائت فخر ننی!!!!	۵

↓ صفحه‌ی بعدی مطالعه شود ↓

$y_2 \cot \alpha \neq 1 \rightarrow \cot \alpha \neq 1 \rightarrow \sin \alpha \neq 0 \rightarrow \alpha \neq k\pi$ $\tan \alpha \neq 1 \rightarrow \tan \alpha \neq 1 \rightarrow \cos \alpha \neq 0 \rightarrow \alpha \neq k\pi + \frac{\pi}{2}$ $\rightarrow \tan \alpha \neq 1 \rightarrow \tan \alpha \neq 1 \rightarrow \alpha \neq k\pi + \frac{\pi}{4}$ $y_2 \sqrt{1 - \sin^2 \alpha} \rightarrow \dots$	$\cot \alpha \neq 1$  $R = \{k\pi, k\pi + \pi\}$ $k\pi - \pi$ $\sin \alpha > \frac{1}{2}$  $\frac{1}{2}, \frac{\pi}{6}$
$y_2 \sqrt{\sin \alpha - 1} \rightarrow \sin \alpha \geq 1 \rightarrow \sin \alpha \geq \frac{1}{2} \rightarrow [2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6}]$ $y_2 \sqrt{1 - 2\cos \alpha} \rightarrow 1 \geq 2\cos \alpha \rightarrow \cos \alpha \leq \frac{1}{2} \rightarrow R = [2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}]$	$\sin \alpha > \frac{1}{2}$  $\frac{1}{2}, \frac{\pi}{6}$
$y_2 \arcsin(a^2 + a + 1) \rightarrow -1 \leq a^2 + a + 1 \leq 1$ $-1 \leq a^2 + a + 1 \rightarrow a^2 + a + 2 \geq 0 \rightarrow (a+1)(a+2) \geq 0 \rightarrow a \leq -2, -1$ $a^2 + a + 1 \leq 1 \rightarrow a^2 + a \leq 0 \rightarrow a(a+1) \leq 0 \rightarrow a \in [-1, 0]$	$\arcsin$  $D = [-2, -1] \cup [-1, 0]$
$\cos y = \sqrt{0.2x} \rightarrow -1 \leq \sqrt{0.2x} \leq 1 \rightarrow 0 \leq \sqrt{0.2x} \leq 1 \rightarrow 0 \leq 0.2x \leq 1 \rightarrow 0 \leq x \leq 5$ $\omega - 2x \leq 1 \rightarrow x \geq 2$	$\cos$ $0 \leq x \leq 5$
$y_2 \log_r(1 - \log_r^a) \rightarrow (I) \rightarrow 1 - \log_r^a > 0 \rightarrow \log_r^a < 1 \rightarrow a < r$ $(II) \rightarrow -\log_r^a > 0 \rightarrow a > 1$ $y_2 \log_r(1 - \log_r^{\frac{a}{r}}) \rightarrow (I) \rightarrow 1 - \log_r^{\frac{a}{r}} > 0 \rightarrow \log_r^{\frac{a}{r}} < 1 \rightarrow \frac{a}{r} < r \rightarrow a < r^2$ $(II) \rightarrow \log_r^{\frac{a}{r}} > 0 \rightarrow \frac{a}{r} > 1 \rightarrow a > r$	$\log$ $a < r$ $a > r$ $\frac{1}{r}$
$y_2 \sqrt{2x - x^2} \rightarrow x - x^2 \geq 0 \rightarrow x(1 - x) \geq 0 \rightarrow x \in [0, 1]$ $\rightarrow \begin{cases} x \geq 0 \\ x \leq 1 \end{cases}$ $y_2 \left(\frac{r_{a+1}}{r_{a+2}}\right)! \in W \rightarrow \frac{r_{a+1}}{r_{a+2}} \in W \rightarrow r_{a+1} + 0 = r_{a+1}W + r_{a+2}W \rightarrow r_{a+1} - r_{a+2}W = r_{a+2}W - 0$	$\sqrt{2x - x^2}$ $x \in [0, 1]$ W

$$2- \text{ب}) \frac{x+3}{x^3-2x^2+2x-1} \geq 0 \rightarrow \frac{x+3}{(x-1)(x^2-x+1)} \geq 0$$

$\rightarrow$ همیشه ضرایب مناسبت (نقش‌پذیر بر ۱- x)
 $\rightarrow$ همیشه ندارد! $\Delta < 0$

$$\frac{-3}{+} \quad \frac{1}{-} \quad \frac{1}{+}$$

$$\sim D_f = (-\infty, -3] \cup (1, +\infty)$$

$$5- \text{الف}) [n - \frac{1}{x}] + [n + \frac{2}{x}] \geq 0 \xrightarrow{+1} [n - \frac{1}{x}] + 1 + [n + \frac{2}{x}] \geq 1$$

$[n] + k = [n+k]$
 $\rightarrow$ اولین عدد صحیح بزرگتر از $\frac{1}{x}$ برابر یک است!

$$[n + \frac{2}{x}] + [n + \frac{2}{x}] \geq 1 \rightarrow [n + \frac{2}{x}] \geq \frac{1}{2} \rightarrow n + \frac{2}{x} \geq 1$$

$$n \geq \frac{1}{x} \rightarrow D_f = [\frac{1}{x}, +\infty)$$

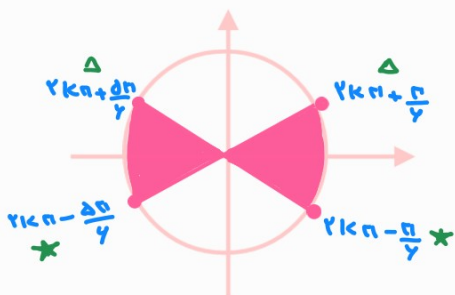
$$5- \text{ب}) [n - \frac{1}{x}] + [-n + \frac{1}{x}] \geq 0$$

مردانیم:

$$[n] + [-n] \begin{cases} \hookrightarrow n \in \mathbb{Z} & 0 \checkmark \\ \hookrightarrow n \notin \mathbb{Z} & -1 \times \end{cases} \rightarrow [n - \frac{1}{x}] \in \mathbb{Z} \rightarrow n \in \mathbb{Z} + \frac{1}{x}$$

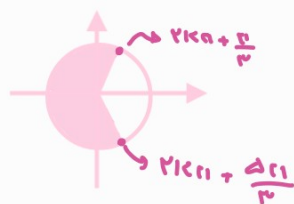
$$D_f = \{n \mid n = k + \frac{1}{x}, k \in \mathbb{Z}\}$$

$$4- \text{ب}) 1 - x \sin^2 n \geq 0 \rightarrow x \sin^2 n \leq 1 \rightarrow \sin^2 n \leq \frac{1}{x} \rightarrow -\frac{1}{\sqrt{x}} \leq \sin n \leq \frac{1}{\sqrt{x}}$$



$$\rightarrow D_f = [k\pi - \frac{\pi}{4}, k\pi + \frac{\pi}{4}]$$

ب- ٧) $1 - 2c \cdot \sin \geq 0 \rightarrow \sin \leq \frac{1}{r}$



$\rightarrow Df_c [r \cos(n + \frac{\pi}{r}), r \cos(n + \frac{2\pi}{r})]$

الف- ٨) $-1 \leq x^r + \frac{r}{r} + 1 \leq 1 \rightarrow -1 \leq x^r + \frac{r}{r} + \frac{1}{\varepsilon} - \frac{1}{\varepsilon} \leq 1$

$\frac{1}{\varepsilon} \leq x^r + \frac{r}{r} + \frac{1}{\varepsilon} \leq \frac{1}{\varepsilon} \rightarrow \frac{1}{\varepsilon} \leq (n + \frac{r}{r})^r \leq \frac{1}{\varepsilon}$

$\int (n + \frac{r}{r})^r \leq \frac{1}{\varepsilon} \rightarrow -\frac{r}{r} \leq n + \frac{r}{r} \leq \frac{r}{r} \rightarrow -r \leq n \leq 0 \quad I$

$\int (n + \frac{r}{r})^r \geq \frac{1}{\varepsilon} \rightarrow n + \frac{r}{r} \geq \frac{1}{r} \rightarrow n \geq -1 \leq n + \frac{r}{r} \leq -\frac{1}{r} \rightarrow n \leq -r \quad II$

$I \cap II \rightarrow Df = [-r, -r] \cup [-1, 0]$

ب- ٨) $\sqrt{1 - 2n} \rightarrow 1 - 2n \geq 0 \rightarrow n \leq \frac{1}{2}$

$\rightarrow Df_c [r, \frac{1}{r}]$

$-1 \leq \sqrt{1 - 2n} \leq 1 \rightarrow 1 - 2n \leq 1 \rightarrow -2n \leq -1 \rightarrow n \geq \frac{1}{2}$

محدوده برگزیده است ✓

الف- ٩) $y = \log_r (1 - \log_r^n)$ $\rightarrow \log_r^n \rightarrow n > 0$

$\hookrightarrow 1 - \log_r^n > 0 \rightarrow \log_r^n < 1 \rightarrow n < r$

$Df_c (0, r)$

ب- ٩) $y = \log_r (1 - \log_r^n \frac{1}{r})$ $\rightarrow \log_r^n \frac{1}{r} \rightarrow n > 0$

$\hookrightarrow 1 - \log_r^n \frac{1}{r} > 0 \rightarrow \log_r^n \frac{1}{r} < 1 \xrightarrow{\text{مناسب (مربع)}} n > \frac{1}{r}$

$Df_c (\frac{1}{r}, +\infty)$

$$1. \text{ الف} - 1. \quad \begin{matrix} n-1 \\ 2 \end{matrix} - 1 \geq 0 \rightarrow \begin{matrix} n-1 \\ 2 \end{matrix} \geq 2^1 \rightarrow n-1 \geq 2 \rightarrow$$

$$n^2 - 2n + 1 \leq 0 \rightarrow (n-1)(n-1) \leq 0. \quad \begin{array}{c} 1 \quad 2 \\ + \mid - \mid + \end{array} \rightarrow D_f = [1, 2]$$