

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۴ کلاس پایه دهم (فصل اول)

$(a-x)x^2 + ax + b = 0 \rightarrow \frac{x^3}{-} \mid + \Rightarrow \text{عبارت } x^3 \text{ را در } x^2 \text{ می بینیم} \rightarrow \text{حاصل می شود } x$
 $\rightarrow \text{حاصل می شود } x \rightarrow x^2 \text{ می بینیم } = 0 \rightarrow a-x=0 \rightarrow a=x \Rightarrow x^2 + bx = 0 \xrightarrow{x=x} x+b=0 \rightarrow \boxed{b=-4}$

$$\lambda + r\lambda + r - mr \geq 0 \rightarrow \Delta \leq 0 \rightarrow K - K(r-mr) \leq 0 \rightarrow \cancel{K-\lambda} + Kmr \leq 0 \rightarrow Kmr \leq K \rightarrow mr \leq 1$$

$$1 - (-1) = \textcircled{2}$$

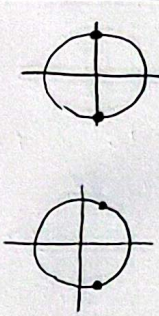
$k - n^2 \geq 0 \rightarrow k \geq n^2 \rightarrow n \leq \sqrt{k} \quad (1)$
 $\Rightarrow (1) \wedge (2) \Rightarrow D_f = \{-2, -1, 0, 1, 2\} \rightarrow \text{مجموعه } (5) \text{ عدد}$
 $[n] + [-n] + 1 \neq 0 \rightarrow [n] + [-n] \neq -1$
 $n \notin \mathbb{Z} \text{ است } \Rightarrow n \in \mathbb{Z} \text{ نیست } (2)$

الف) $x^r + x^r x^r \gg_0 \rightarrow x^r (x^r + x^r) \gg_0 \rightarrow \frac{-r \quad -r}{-1 \quad +1 \quad +1} \rightarrow D = [-r, +\infty)$

$$\text{ب) } \frac{(n-1)(n+1)n^2(n-2)}{n^4-1} \approx \frac{-1 \cdot 1 \cdot 1 \cdot 1}{-1+1-1+1} \rightarrow D = [-1, 1) \cup [2, +\infty)$$

الف) $|x-r| - r \geq 0 \rightarrow |x-r| \geq r \begin{cases} x-r \geq r \rightarrow x \geq \omega \\ x-r \leq -r \rightarrow x \leq -1 \end{cases} \} D = (-\infty, -1] \cup [\omega, +\infty)$

ب) $K = \{x \in \mathbb{R} \mid x \geq 0\} \rightarrow |x - n| \leq K \rightarrow -K \leq x - n \leq K \rightarrow -K \leq -n \leq K \rightarrow y \geq n \geq -y$
 $D = [-r, r]$

الف) $1 - x x > 0 \rightarrow f(x) \begin{cases} x > 0 & 1 - x^2 > 0 \rightarrow -1 < x < 1 \cap x > 0 \Rightarrow 0 < x < 1 \\ x < 0 & 1 + x^2 > 0 \rightarrow \mathbb{R} \cap x < 0 \Rightarrow x < 0 \end{cases}$ $\Rightarrow [0, 1] \cup (-\infty, 0) = (-\infty, 1]$ ب) $\sqrt{1 - x - a } > 0 \rightarrow x - a < 1 \rightarrow -1 < x - a < 1 \rightarrow a - 1 < x < a + 1$ $\sqrt{1 - x - a } - 1 \neq 0 \rightarrow \sqrt{1 - x - a } \neq 1 \rightarrow 1 - x - a \neq 1 \rightarrow x - a \neq 0 \rightarrow x - a \neq 0 \rightarrow x \neq a$ $\Rightarrow D = [a - 1, a + 1] - \{a\}$	6
الف) $\cos x \neq 0 \rightarrow D = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$ ب) $\cos x - 1 \neq 0 \rightarrow \cos x \neq 1 \rightarrow x \neq 2k\pi$ $\Rightarrow D = \mathbb{R} - \{2k\pi\}$	7 
الف) $x + 1 - x + 2 \neq 0 \rightarrow x + 1 = x + 2 \rightarrow (x + 1)^2 = (x + 2)^2 \rightarrow (x + 1)^2 - (x + 2)^2 = 0$ $(x + 1 + x + 2)(x + 1 - x - 2) = 0 \rightarrow (2x + 3)(-1) = 0 \rightarrow 2x + 3 = 0 \rightarrow x = -\frac{3}{2}$ $\Rightarrow D = \mathbb{R} - \{-\frac{3}{2}\}$ ب) $x + 1 - x + 2 > 0 \rightarrow (x + 1)^2 > (x + 2)^2 \rightarrow (x + 1)^2 - (x + 2)^2 > 0$ $(2x + 3)(-1) > 0 \rightarrow 2x + 3 < 0 \rightarrow x < -\frac{3}{2}$ $\Rightarrow D = (-\infty, -\frac{3}{2})$	8
$\log_{\frac{1}{2}} \log_a^{x-1} > 0 \xrightarrow{0 < \frac{1}{2} < 1} \log_a^{x-1} < 1 \rightarrow x - 1 < a \rightarrow x < a + 1$ $x - 1 > 0 \rightarrow x > 1 \rightarrow a > \frac{1}{2} \quad \text{①}$ $\log_a^{x-1} > 0 \rightarrow x - 1 > 1 \rightarrow x > 2 \rightarrow a > 1 \quad \text{②}$ $\Rightarrow \text{①} \cap \text{②} \rightarrow D = (1, \infty)$	9
الف) $\cos x + 1 > 0 \rightarrow \cos x > -1 \rightarrow D = \mathbb{R} - \{k\pi + \pi\}$ ب) $\log_{\frac{n-1}{n+1}} > 0 \rightarrow \frac{n-1}{n+1} > 1 \rightarrow \frac{n-1}{n+1} > 1 \rightarrow n - 1 > n + 1 \rightarrow -2 > 2 \rightarrow \text{no solution}$ $\Rightarrow D = \emptyset$	10 