

19

پاسخنامه تشریحی تکلیف شماره کلاس

نام و نام خانوادگی:
پاسخنامه تشریحی تکلیف شماره کلاس

الف) $\Rightarrow R$ 5

ب) $y = \frac{1}{x^2 - 2x} \rightarrow yx^2 - 2xy - 1 = 0 \Rightarrow \frac{2y \pm \sqrt{4y(y+1)}}{2y} \rightarrow 4y(y+1) \geq 0$
 $R = (-\infty, -1] \cup (0, +\infty)$

الف) $y = x^2 - 4x + 10 \xrightarrow{\text{min}} x_{\min} = \frac{-b}{2a} = \frac{4}{2} = 2 \Rightarrow R_p = [4, +\infty)$
 $y_{\min} = 6$ 5

ب) $y = -x^2 + 4x + 3 \xrightarrow{\text{max}} x_{\max} = 2 \Rightarrow R_p = (-\infty, 12]$
 $y_{\max} = 11$

ج) $\sqrt{x^2 - 4x - 3} \xrightarrow{\text{min}} x_{\min} = 2 \Rightarrow R_p = \sqrt{EU, +\infty) = (0, +\infty)$
 $y_{\min} = -1$ 5

الف) R 5

ب) R

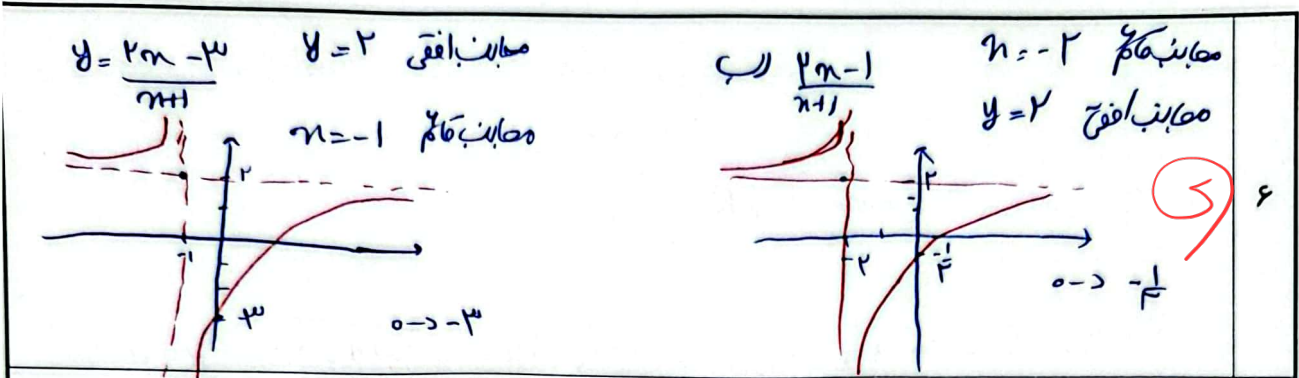
ج) $\sqrt{R} \rightarrow [0, +\infty)$

د) $R - \{1\} \rightarrow R - \{3\}$

ه) $R - \{2\}$

الف) $\sqrt{R - \{2\}} \Rightarrow \sqrt{R - \{2\}} = (0, +\infty) - \{2\}$

ب) $\sqrt{R - \{1, 3\}} \Rightarrow [0, +\infty)$ 5



الف) $-1 \leq \sin n \leq 1 \rightarrow R = (-\infty, -1] \cup [1, +\infty)$

ب) $\frac{n^4+1}{n^5} \rightarrow \frac{n^4}{n^5} + \frac{1}{n^5} \rightarrow \frac{1}{n} + \frac{1}{n^5} \rightarrow R = (-\infty, -1] \cup [1, +\infty)$

ج) $\frac{\sqrt[3]{n^3}}{\sqrt[3]{n^3}} + \frac{1}{\sqrt[3]{n^3}} \rightarrow \sqrt[3]{n} + \frac{1}{\sqrt[3]{n^3}} \rightarrow (-\infty, -1] \cup [1, +\infty)$

د) $\sqrt{n} + \frac{1}{\sqrt{n}} \xrightarrow{\text{مربع}} R = [1, +\infty)$

$\frac{n^3+1}{n^3+1} - 1 \rightarrow \frac{n^3}{n^3+1} - \frac{1}{n^3+1} \rightarrow R = [\frac{1}{n^3}, +\infty)$

$\frac{n^2+1}{\sqrt{n^2+1}} \rightarrow \frac{n^2+1}{\sqrt{n^2+1}} + \frac{1}{\sqrt{n^2+1}} \Rightarrow \sqrt{n^2+1} + \frac{1}{\sqrt{n^2+1}} \rightarrow R = [\frac{1}{\sqrt{n^2+1}}, +\infty)$

$|n-3| + |n+1|$

$n > 3 \Rightarrow n-3+n+1 = 2n-2$
 $-\frac{\epsilon}{2} \leq n \leq 3 \Rightarrow -n+3+n+1 = 4$
 $n < -\frac{\epsilon}{2} \Rightarrow -n+3+n+1 = 4$

$n > 3 \Rightarrow n-3+n+1 = 2n-2$
 $n < -\frac{\epsilon}{2} \Rightarrow -n+3+n+1 = 4$

الف) $y = |n-2| + |n+1| - \frac{1}{n+1} \rightarrow R = [1, +\infty)$

ب) $y = |n+1| - |n+1| \rightarrow R = [-1, +\infty)$

نوشته برد و ضابطه نویسی