

نام و نام خانوادگی (هواپژدانشیار) پاسخنامه تشریحی تکلیف شماره ۷... کلاس یازدهم ریاضت B...

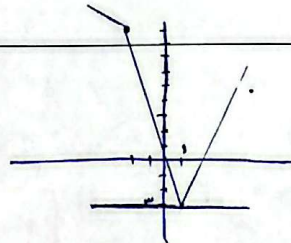
الف $y = x + |2x - 4|$ $\rightarrow \frac{2}{-2x+4} \cdot \frac{1}{3x-4} \rightarrow [2, +\infty)$

ب $y = |x-2| + |x-1| - |x|$

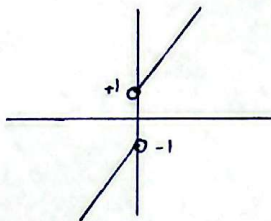
$\frac{0}{-x+3} \cdot \frac{1}{-3x+3} \cdot \frac{1}{-x+1} \cdot \frac{1}{x-3} \rightarrow [-1, +\infty)$

$|3x-3| - |x+2| = k$

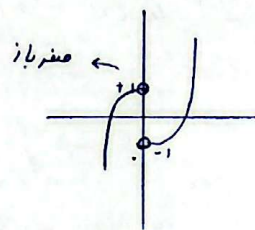
$\frac{-2}{-2x+5} \cdot \frac{1}{-x+1} \cdot \frac{1}{2x-5} \rightarrow k = -3$



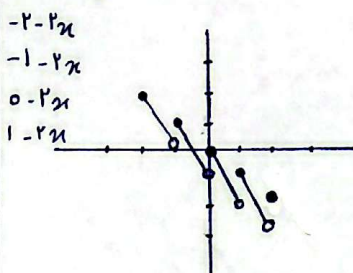
الف $x + \frac{x}{|x|} \rightarrow \frac{0}{x-1} \cdot \frac{1}{x+1}$



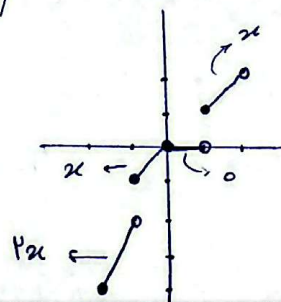
ب $y = x|x| - \frac{x}{|x|} \rightarrow \frac{0}{-x^2+1} \cdot \frac{1}{x^2-1}$



الف $y = [x] - 2x$



ب $y = [x]/|x|$



الف $y = 3x - [3x] \rightarrow x - [x] \rightarrow [0, 1)$

ب $y = 4x - [4x] \rightarrow 4(x - [x]) = 4 \times [0, 1) \rightarrow [0, 4)$

ج $y = x - 5[\frac{x}{5}] \rightarrow 5(\frac{x}{5} - [\frac{x}{5}]) = 5 \times [0, 1) \rightarrow [0, 5)$

د $y = [2x] - 2x = -(2x - [2x]) = [-1, 0]$

$y = r \sin x + r \cos x \rightarrow -\sqrt{r^2+r^2} \leq \leq \sqrt{r^2+r^2} \rightarrow [-\sqrt{2}r, +\sqrt{2}r]$ $y = r \sin x - r \cos x \rightarrow -\sqrt{r^2+r^2} \leq \leq +\sqrt{r^2+r^2} \rightarrow [-\sqrt{2}r, +\sqrt{2}r]$ $y = [r \sin x + r \cos x] \rightarrow -\sqrt{r^2+r^2} \leq \leq +\sqrt{r^2+r^2} \rightarrow \{0, \pm 1, \pm 2, \pm 3, \pm 4, \pm 5, \pm 6, \pm 7, \pm 8, \pm 9\}$ $y = \sqrt{\cos x} - r \sin x \rightarrow -\sqrt{r^2} \leq \leq +\sqrt{r^2} \rightarrow [-r, +r]$	6
$y = \sin^2 x + r \sin x + r$ $\begin{matrix} +1 \rightarrow r \\ -1 \rightarrow 0 \\ -\frac{b}{2a} = -\frac{r}{2} \rightarrow -\frac{r}{2} \end{matrix}$ $[-\frac{r}{2}, r]$ $y = r \sin^2 x + r \sin x + r$ $\begin{matrix} -1 \rightarrow 1 \\ +1 \rightarrow r \\ -\frac{b}{2a} = -\frac{r}{2} \rightarrow \frac{r}{2} \end{matrix}$ $[\frac{r}{2}, r]$	7
$y = \sin^2 x + r \cos^2 x = 1 + \frac{r \cos^2 x}{1} = [1, r]$ $y = \frac{r \cot^2 x}{1 + \cot^2 x} = \frac{r \frac{\cos^2 x}{\sin^2 x}}{\frac{1}{\sin^2 x}} = r \sin^2 x = \sin^2 x = [-1, +1]$	8
$\sin^2 x + \cos^2 x =$ $r^{1-k} \leq 1 \rightarrow r^{-k} \leq 1 \rightarrow [\frac{1}{r}, 1]$ $y = [\sin^2 x + \cos^2 x]$ $r^{1-k} \leq 1 \rightarrow r^{-k} \leq 1 \rightarrow [\frac{1}{r}, 1] \rightarrow \{0, 1\}$	9
$y = \frac{rx^2 + vx - f}{x + f} = \frac{(x+f)(x-1)}{(x+f)} \rightarrow x-1 \rightarrow \text{if } x = -f \rightarrow -9 \rightarrow \mathbb{R} - \{-9\}$ $y = \frac{x^3 - 1}{x - 1} = \frac{(x-1)(x^2 + x + 1)}{(x-1)} \rightarrow -\frac{b}{2a} = -\frac{1}{2} \rightarrow \frac{r}{f} \rightarrow [\frac{r}{f}, +\infty)$	10