

نام و نام خانوادگی پارسا انزلی پاسخنامه تشریحی تکلیف شماره 3 کلاس B دوم

الف) $y^3 - x = 2x^2$ $\left. \begin{matrix} y^3 - x - 2x^2 = 0 \\ y^3 - x - 2x^2 = 0 \end{matrix} \right\} y_1 = y_2 \Rightarrow y_1 = y_2 \checkmark$

ب) $|y| + x^2 = x + 3 \Rightarrow x = 0 \Rightarrow |y| = 3 \Rightarrow y = 3 \text{ و } -3 \times$

ج) $\sqrt{x-4} + |y-2| = 0 \Rightarrow \text{مثبت} + \text{مثبت} = 0 \checkmark$

د) $x = \cos y \Rightarrow x = 1 \Rightarrow y = 0 \text{ و } 360 \times$

الف) $y = \frac{x+4}{x^2-4x}$ $df = \mathbb{R} - \{0, 4\}$

ب) $y = \frac{x+4}{x^2-7x+16}$ $\Delta = b^2 - 4ac = (-7)^2 - 4 \times 1 \times 16 = 49 - 64 = -15$

ج) $y = \frac{x+4}{x^2+x+4}$ $df = \mathbb{R}$ $x = \frac{-1 \pm \sqrt{-15}}{2} \Rightarrow \frac{-1}{2} - \frac{\sqrt{-15}}{2} \leq \frac{-1}{2} + \frac{\sqrt{-15}}{2}$

د) $y = \frac{x+4}{x^2-4x}$ $df = \mathbb{R} - \{0, 2, 9-2\}$

الف) $y = \sqrt{4-x} + \sqrt{x-2}$ $x \leq 4$ و $x \geq 2$ $df = 2 \leq x \leq 4$

ب) $y = \frac{3x+1}{x^2+1}$ $x^2 \geq 0 \Rightarrow x^2+1 > 0 \Rightarrow df = \mathbb{R}$

ج) $y = \frac{\sqrt{x-2}}{x-4}$ $x \geq 2$ و $x \neq 4 \Rightarrow df = [2, 4) \cup (4, +\infty)$

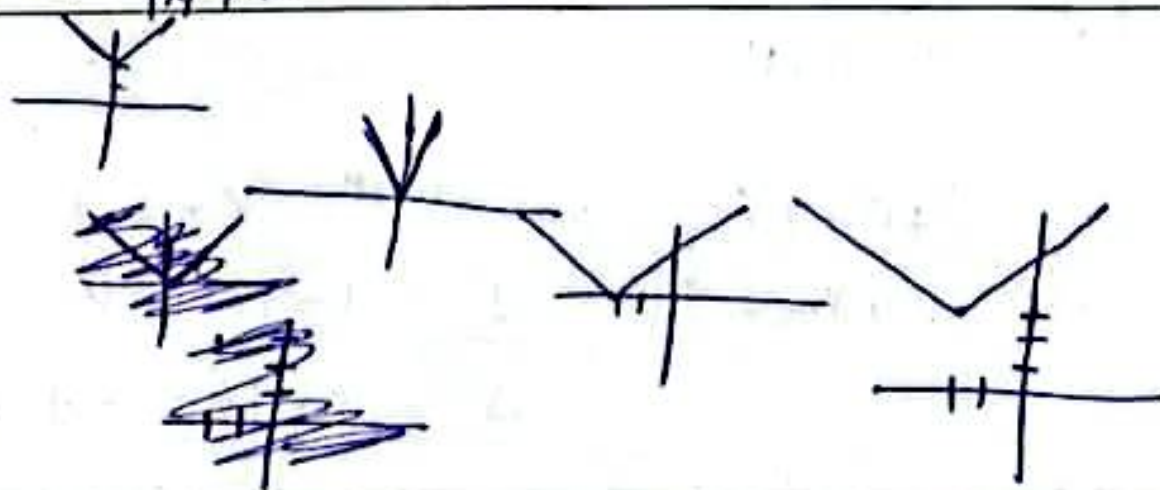
د) $y = \frac{2x+3}{|x|+x^2} \Rightarrow |x| \geq 0$ و $x^2 \geq 0$ $df = \mathbb{R} - \{0\}$

الف) $y = |x| + 2$

ب) $y = 2|x|$

ج) $y = |x+2|$

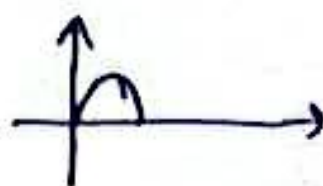
د) $y = |x+2| + 3$



الف) $g(x) = f(x) + 2$

ب) $2f(x)$

ج) $f(x-1)$



د) $g - f(x)$

الف) $y = (x-2)(x-3)(x-4)$

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ب) $y = (x-2)(x-3)^2(x-4)$

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$$\begin{array}{c} 2 & 3 & 4 \\ - & + & - & + \end{array}$$

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الف) $y = \frac{(x-2)(x-4)}{x-3}$

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ب) $y = \frac{(x-2)(x-4)}{(x-3)^2}$

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$$\begin{array}{c} 2 & 3 & 4 \\ - & + & - & + \end{array}$$

الف) $y = \frac{x^3 - 3x + 2}{x-3}$

$x = 2, 1$
 $x \neq 3$

$$\begin{array}{c} 1 & 2 & 3 \\ - & + & - & + \end{array}$$

ب) $y = \frac{x^3 - 3x + 2}{x^2 - 5x + 3}$

$x = 2, 1$

$$\begin{array}{c} 1 & 2 & 3 \\ + & 0 & + & - & 0 & + \end{array}$$

$x = 3, 1$

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الف) $y = \frac{x^2 - x}{x^2 + x + 2}$

$y \geq 0$

$$\begin{array}{c} + \end{array}$$

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ب) $y = \frac{x^2 + 3x + 3}{x^2 + 2x + 3}$

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$y \geq 0$

$\Delta = 9 - 12 = -3$

$\Delta = 4 - 12 = -8$

$$\begin{array}{c} + \end{array}$$

الف) $y = \sqrt{\frac{x^3 - 1}{x^3 - 2x}}$

$(-\infty, -1) \cup (0, 1) \cup (1, +\infty)$

ب) $y = \sqrt{\frac{x^2 - 16}{x^2 - 5x + 4}}$

$x = 1, 4$

$$\begin{array}{c} 1 & 4 \\ + & 0 & - & 0 & + \end{array}$$

$(-\infty, 1) \cup (4, +\infty)$

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