

14,20

نام و نام خانوادگی پرشیان پارس پاسخنامه تشریحی تکلیف شماره 3 کلاس هم B

الف) $y^3 - x = 2x^2$ $y_1^3 - x - 2x^2 = 0$ $y_2^3 - x - 2x^2 = 0$ $y_1 = y_2 \Rightarrow y_1 = y_2$ ✓

ب) $|y| + x^2 = x + 3 \Rightarrow x = 0 \Rightarrow |y| = 3 \Rightarrow y = 3, -3$ X ✓

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

د) $x = \cos y \Rightarrow x = 1 \Rightarrow y = 0, 2\pi$ X ✓

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

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 $x \neq 4 \Rightarrow df = [2, 4) \cup (4, +\infty)$ ✓

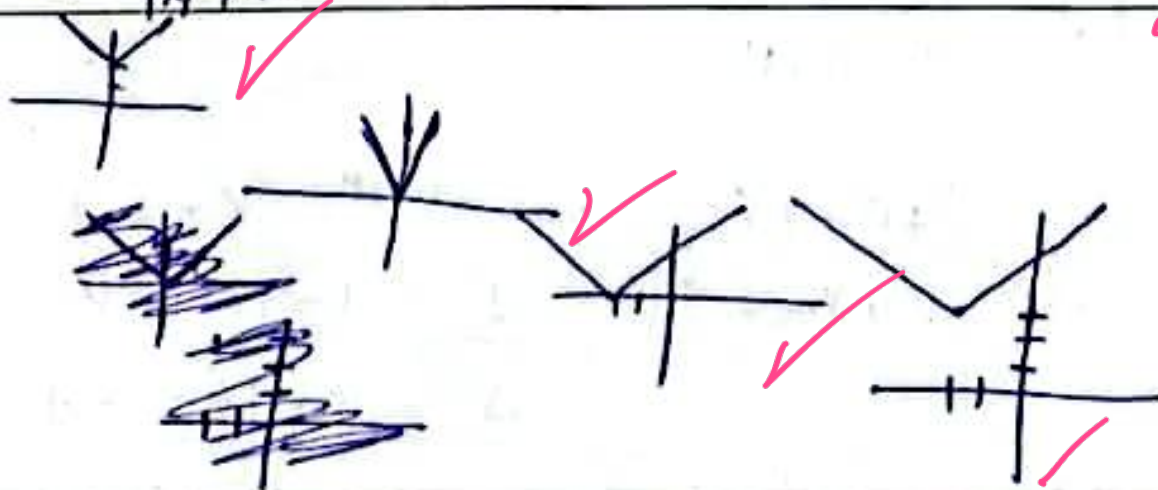
د) $y = \frac{2x+3}{|x|+x^2}$ $\Rightarrow |x| \geq 0$ و $x^2 \geq 0$ $df = \mathbb{R} - \{0\}$ ✓

الف) $y = |x| + 2$ ✓

ب) $y = 2|x|$ ✓

ج) $y = |x+2|$ ✓

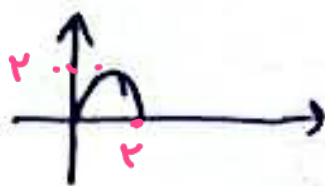
د) $y = |x+2| + 3$ ✓



الف) $y = f(x) + 2$ ✓



ب) $y = 2f(x)$ ✓



ج) $y = f(x-1)$ ✓



د) $y = f - f(x)$ ✓



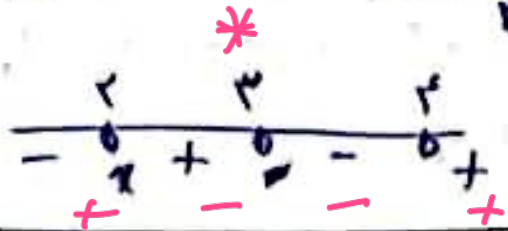
الف) $y = (x-2)(x-3)(x-4)$

← اینست مفاهف

ب) $y = (x-2)(x-3)^2(x-4)$

010

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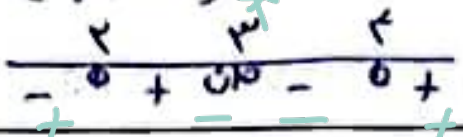


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الف) $y = \frac{(x-2)(x-4)}{x-3}$

ب) $y = \frac{(x-2)(x-4)}{(x-3)^2}$

← اینست مفاهف



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الف) $y = \frac{x^3 - 3x + 2}{x-3}$

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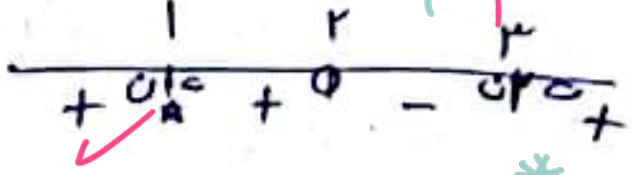
$x = 2, 1$
 $x \neq 3$



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ب) $y = \frac{x^3 - 3x + 2}{x^2 - 4x + 3}$

$x = 2, 1$

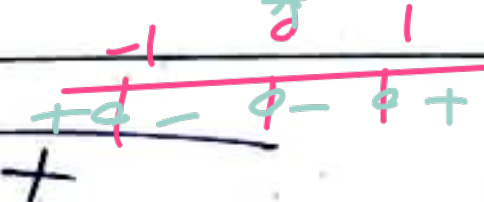


$x = 3, 1$

الف) $y = \frac{x^4 - x^2}{x^2 + x + 2}$

2

$x^2(x-1)(x+1)$
 $y \geq 0$



1

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

$\Delta = 9 - 12 = -3$
 $\Delta = 4 - 12 = -8$

$y \geq 0$

الف) $y = \sqrt{\frac{x^3 - 1}{x^3 - 4x^2 + 4x}}$

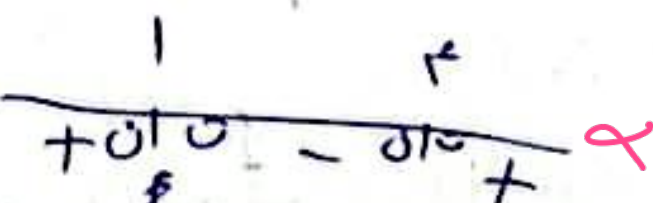
فاصله مرتبش

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

1

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

$x = 1, 4$



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