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نام و نام خانوادگی: ...

پاسخنامه تشریحی تکلیف شماره ۹ ... کلاس A

الف) $y = x^2 - 2$ $x^2 = y + 2 \rightarrow x = \pm \sqrt{y + 2}$ $[-2, +\infty) = R_f$

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ب) $y = x^2 + 1$ $x^2 = y - 1 \rightarrow x = \pm \sqrt{y - 1}$ $1R = R_f$

الف) $y = x^2 - 2x + 4$ $x^2 - 2x + 2 + 2 = (x - 1)^2 + 2 = y \rightarrow x - 1 = \pm \sqrt{y - 2} \rightarrow x = 1 \pm \sqrt{y - 2}$
 $y \geq 2$
 $R_f = [2, +\infty)$

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ب) $y = x^2 - 2x + 1 + 2$ $x^2 - 2x + 1 = (x - 1)^2 = y - 2$
 $(x - 1)^2 = y - 2 \rightarrow x - 1 = \pm \sqrt{y - 2} \rightarrow x = 1 \pm \sqrt{y - 2}$
 $y \geq -2$
 $R_f = [-2, +\infty)$

الف) $y = \frac{x^2 + 3}{x^2 - 2}$ $y(x^2 - 2) = x^2 + 3 \rightarrow yx^2 - 2y = x^2 + 3 \rightarrow x^2(y - 1) = 2y + 3 \rightarrow x^2 = \frac{2y + 3}{y - 1}$
 $x = \pm \sqrt{\frac{2y + 3}{y - 1}}$ $y > \frac{3}{2}$

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ب) $y = \frac{2|x| + 1}{|x| - 2}$ $y(|x| - 2) = 2|x| + 1 \rightarrow y|x| - 2y = 2|x| + 1$
 $|x|(y - 2) = 2y + 1 \rightarrow |x| = \frac{2y + 1}{y - 2}$

$|x| = \frac{2y + 1}{y - 2}$

$R_f = (1, +\infty)$
 $+\frac{-1}{2} - \frac{2}{2} + \frac{2}{2} = 1$
 $R_f = (-\infty, 1] \cup (2, +\infty)$

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الف) $y = x^2 - 4x + 2$ $a > 0 \rightarrow \begin{cases} x_{min} = \frac{b}{2a} = \frac{4}{2} = 2 \\ y_{min} = -V \end{cases}$

$R_f = [-V, +\infty)$

ب) $y = -x^2 + 2x + 2$ $a < 0 \rightarrow \begin{cases} x_{max} = \frac{-b}{2a} = \frac{-2}{-2} = 1 \\ y_{max} = V \end{cases}$

$R_f = (-\infty, V]$

الف) $y = \sqrt{x^2 - 4x + 2}$ $a > 0 \rightarrow \begin{cases} x_{min} = \frac{4}{2} = 2 \\ y_{min} = -V \end{cases}$ $\sqrt{[-V, +\infty)} \rightarrow [0, +\infty)$

ب) $y = \sqrt{-x^2 + 2x + 1}$ $a < 0 \rightarrow \begin{cases} x_{max} = \frac{-b}{2a} = \frac{-2}{-2} = 1 \\ y_{max} = \frac{1}{2} \end{cases}$ $\sqrt{(-\infty, 1]} \rightarrow [0, 1]$

$(-\infty, \sqrt{1/2}]$

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$$y = \frac{1}{x^2 - 2x} \cdot yx^2 - 2yx = 1.50$$

$$(-2y)' = 2xyx' = 12y^2 + 2y \cdot 0$$

$$2y(y+1) = 0$$

$$y = \frac{2y+1}{2}$$

$$y = -\frac{1}{2}$$

$$R_f = (-\infty, -\frac{1}{2}] \cup (0, +\infty)$$

✓

الف) $y = \frac{x^2 + 2x^2 + 2x + 1}{x^2 + 2x + 1} \Rightarrow R_f = \mathbb{R}$

ب) $y = \sqrt{x^2 + 2x^2 + 4x + 1} \Rightarrow R_f = [0, +\infty)$

✓

الف) $y = \frac{x+1}{x-2}$

$$R_f = \mathbb{R} - \{2\}$$

✓

ب) $y = \sqrt{\frac{x+1}{x+2}} \Rightarrow R_f = [0, +\infty) - \{2\}$

$\sqrt{\frac{x}{x}} = 1$

الف) $y = \frac{x+1}{x-2}$

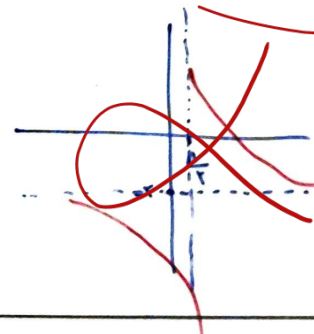
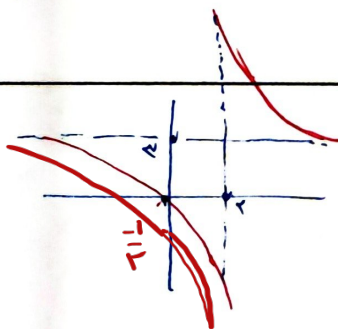
3 بجانب مائل
2 بجانب افقي

$$x = 0 \rightarrow y = -\frac{1}{2}$$

ب) $y = \frac{x-2}{1-2x}$

1/2 بجانب مائل
-2 بجانب افقي

اصول تحويل الفلكلست



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الف) $y = \cos^2 x + \frac{1}{\cos^2 x} \Rightarrow R_f = [2, +\infty)$

✓

ب) $y = \sqrt{\frac{x^2+1}{x}} = \sqrt{x + \frac{1}{x}} \Rightarrow (-\infty, -2] \cup [2, +\infty) \Rightarrow (-\infty, -2] \cup [2, +\infty)$

R_f

1.