Date : Subject :

۵) الف) $y = x^2 - 6x + 2 \rightarrow \frac{-b}{2a} = \frac{6}{2} = 3$ $y = -7$ $[-7, +\infty)$ ✓

۱٫۷۵

ب) $y = -x^2 + 2x + 2 \rightarrow \frac{-b}{2a} = \frac{-2}{-2} = 1$ $y = 3$ $(-\infty, 4]$

$-4 + 8 + 2 = 6$

۶) الف) $\sqrt{x^2 - 6x + 2} \rightarrow \frac{-b}{2a} = \frac{6}{2} = 3$ $y = -7$ $[0, +\infty)$ ✓

۱٫۵

ب) $\sqrt{-x^2 + 2x + 10} \rightarrow \frac{-b}{2a} = \frac{2}{-2} = -1$ $y = -4$ $\emptyset$

$f(2) = -4 + 8 + 10 = 14$ $R_y = [0, \sqrt{14}]$

۷) الف) $R_f = R$ ✓

۲

ب) $[0, +\infty)$ ✗

۸) الف) $R_x = \left(\frac{3}{1}\right)$ ✗

۱٫۵

ب) $R_x = \left(\frac{2}{1}\right)$ $R - \{4\}$ $[0, +\infty) - \{2\}$

$[0, +\infty)$

۹) الف) پاسخ صفحه اول نوشته

۵

ب)

۱۰) الف) $[2, +\infty)$ ✓

۱

ب) $(-\infty, -2]$

$\sqrt[3]{\frac{n+1}{n}}$ $n > 0$ $[\sqrt[3]{2}, +\infty)$

$n < 0$ $(-\infty, -\sqrt[3]{2}]$

PAN

Subject: 15 Date:

سارینا لبری شهبازی

۱) الف) $y = x^2 - 5 \rightarrow x^2 = y + 5 \rightarrow x = \sqrt{y+5}$ ، $y + 5 \geq 0$

$y \geq -5$

$(-\infty, -5)$

ب) $y = x^3 + 1 \rightarrow x^3 = y - 1 \rightarrow \mathbb{R}$

۲) الف) $y = x^2 - 4x + 6 \rightarrow y - 6 = x^2 - 4x$ $y = (x-2)^2 + 2$

$\frac{y-6}{x-4} = \frac{x(x-4)}{x-4}$ $\pm\sqrt{y-2} = x - 2 \rightarrow x = 2 \pm \sqrt{y-2}$

$y \geq 2 \rightarrow R_y = [2, +\infty)$

ب) $y = x^2 - 5x + 1$

$\rightarrow y - 1 = x^2 - 5x$ $y = (x - \frac{5}{2})^2 - \frac{21}{4} \rightarrow x = \frac{5}{2} \pm \sqrt{y + \frac{21}{4}}$

$\frac{y-1}{x-5} = \frac{x(x-5)}{x-5}$ $y \leq -\frac{21}{4} \rightarrow R = [-\frac{21}{4}, +\infty)$

۳) الف) $y = \frac{x^2+3}{x^2-2} \rightarrow yx^2 - 2y = x^2 + 3$ $x^2 y - 2y = x^2 + 3$

$yx^2 - x^2 = 2y + 3$ $x^2(y-1) = 2y + 3$

$\frac{x^2(y-1)}{y-1} = \frac{2y+3}{y-1}$ $x = \pm\sqrt{\frac{2y+3}{y-1}}$ $-\frac{3}{2}$ ، 1 : $+$ | $-$ | $+$

$R_y = (-\infty, -\frac{3}{2}] \cup (1, +\infty)$

ب) $y = \frac{2|x|+1}{|x|-4} = y|x| - 4y = 2|x| + 1$

$y|x| - 2|x| = 4y + 1$ $2|x| + 1 = |x|y - 4y$

$yx - 2x = 4y + 1$ $|x|(2-y) = -4y - 1$

$\frac{x(y-2)}{y-2} = \frac{4y+1}{y-2}$ $|x| = \frac{4y+1}{y-2}$ جواب قدرمطلق $(+)$

$-\frac{1}{4}$ ، 2 : $+$ | $-$ | $+$ $R_y = (-\infty, -\frac{1}{4}] \cup (2, +\infty)$

۴) $yx^2 - 4xy = 1$ $x = \frac{4y \pm \sqrt{16y^2 + 4y}}{2y}$

$\frac{x(yx - 4y)}{yx - 4y} = \frac{1}{yx - 4y}$ $y \neq 0$

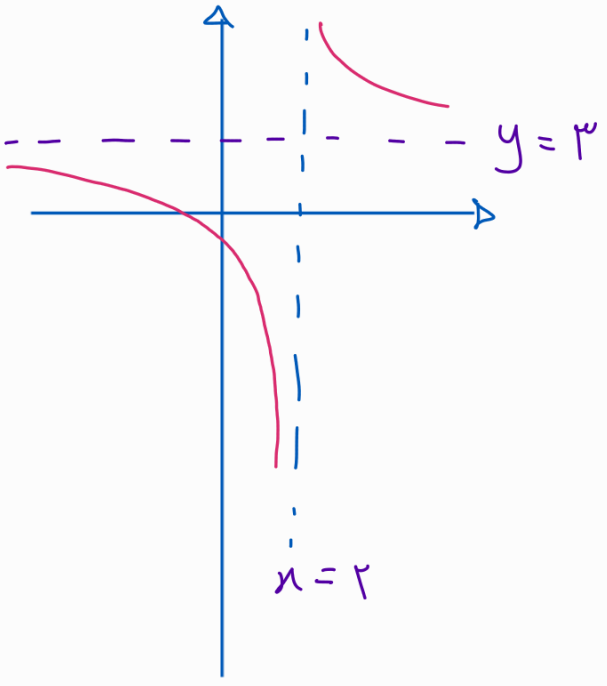
$\Delta \geq 0 \longrightarrow 4y(4y+1) \geq 0$ $-\frac{1}{4}$ ، 0 : $+$ | $-$ | $+$

$R_y = (-\infty, -\frac{1}{4}] \cup (0, +\infty)$

PAN

٩-

$y = \frac{3x+1}{x-2}$



$y = \frac{4x-2}{-2x+1} = \frac{2(2x-1)}{1-2x} = -2$