

18/5

2011/6

سید سید جبار علی

الف) $y = \frac{1}{n-1} \sum_{i=1}^n x_i^2$ $\Rightarrow R_y = \mathbb{R}^+$ ✓ (1) (2)

ب) $y = \frac{1}{n-1} \sum_{i=1}^n x_i$ $\Rightarrow R_y = \mathbb{R}$ ✓

$\Rightarrow n-1 \leq \sqrt{\frac{y-1}{y}} \Rightarrow \frac{y-1}{y} \geq \frac{1}{n^2}$ $\Rightarrow R_y = (-\infty, -1] \cup (0, \infty)$ ✓

الف) $y = \frac{1}{n-1} \sum_{i=1}^n x_i^2$ $\Rightarrow R_y = [0, \infty)$ ✓ (1) (2)

ب) $y = \frac{1}{n-1} \sum_{i=1}^n x_i$ $\Rightarrow R_y = (-\infty, \infty)$ ✓

ج) $y = \sqrt{\frac{1}{n-1} \sum_{i=1}^n x_i^2}$ $\Rightarrow R_y = [0, \infty)$ ✓

د) $y = \sqrt{\frac{1}{n-1} \sum_{i=1}^n x_i}$ $\Rightarrow R_y = [0, \infty)$ ✓

الف) $y = \frac{1}{n-1} \sum_{i=1}^n x_i^2$ $\Rightarrow R_y = \mathbb{R}^+$ ✓ (2) (3)

ب) $y = \frac{1}{n-1} \sum_{i=1}^n x_i$ $\Rightarrow R_y = \mathbb{R}$ ✓

ج) $y = \sqrt{\frac{1}{n-1} \sum_{i=1}^n x_i^2}$ $\Rightarrow R_y = [0, \infty)$ ✓

د) $y = \left(\frac{1}{n-1} \sum_{i=1}^n x_i^2 \right)^{\frac{1}{p}}$ $\Rightarrow R_y = [0, \infty)$ ✓

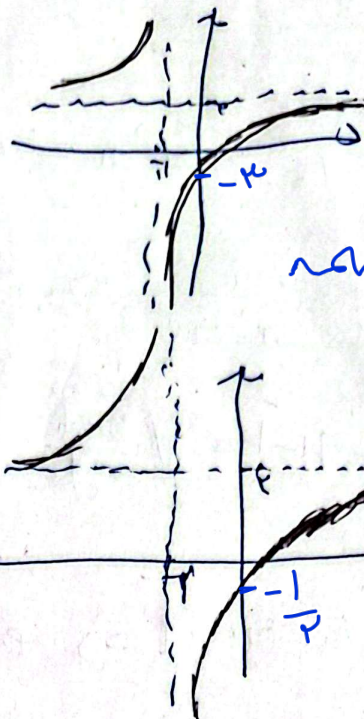
الف) $y = \frac{\sum_{i=1}^n x_i^2}{n-1}$ $\Rightarrow R_y = \mathbb{R}^+ - \{0\}$ ✓ (2) (3)

ب) $\frac{\sum_{i=1}^n x_i^2}{n-1} \Rightarrow R_y = \mathbb{R}^+ - \{0\}$ ✓ (4) (5)

ج) $y = \sqrt{\frac{\sum_{i=1}^n x_i^2}{n-1}}$ $\Rightarrow R_y = [0, \infty) - \{0\}$ ✓

د) $y = \sqrt{\frac{\sum_{i=1}^n x_i^2}{n-1}}$ $\Rightarrow R_y = [0, \infty)$ ✓

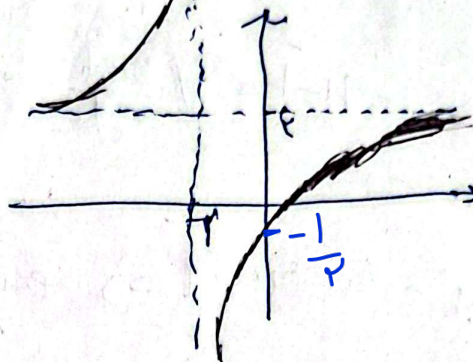
الف) $y = \frac{n-2}{n-1} \rightarrow \begin{cases} \text{جنبه اول} & x = -1 \\ \text{جنبه اولی} & x = 2 \end{cases}$



(1, 5) (4)

نقطه برخورد با
محورها خنثی می‌شود

ب) $y = \frac{n-1}{n+2} \rightarrow \begin{cases} \text{جنبه اولی} & x = 2 \\ \text{جنبه اولی} & x = -2 \end{cases}$



(17)

ان) $y = \sin x + \frac{1}{\sin x} \Rightarrow R_y = (-\infty, -2] \cup [2, +\infty)$ ✓

(2)

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

ج) $y = \sqrt[n]{x} + \frac{1}{\sqrt[n]{x}} \Rightarrow R_y = (-\infty, -2] \cup [2, +\infty)$ ✓

د) $y = \sqrt[n]{x} + \frac{1}{\sqrt[n]{x}} \Rightarrow R_y = [2, +\infty)$ ✓

$y = \sqrt[n]{x} + \frac{1}{\sqrt[n]{x}} \Rightarrow y^2 = \sqrt[n]{x} + \frac{1}{\sqrt[n]{x}} \Rightarrow \min \frac{1}{x}$

(1)

(1)

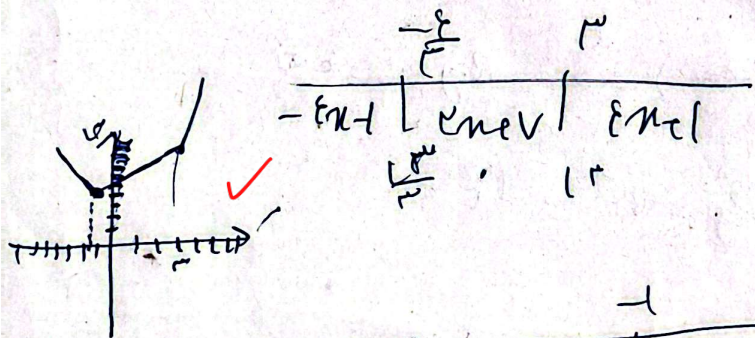
فصل دوم؟

$\Rightarrow R_y = [\frac{1}{x}, +\infty) \cdot -2 \Rightarrow R_y = [\frac{1}{x}, +\infty)$ ✓

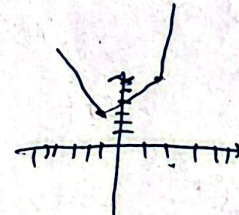
(2) (6)

$R_y = [\frac{1}{x}, +\infty)$

$R_y = 1/2$



الف) $y = \frac{n-1}{n+2} \Rightarrow R_y = [2, +\infty)$ ✓

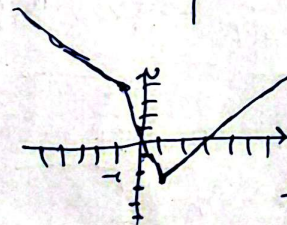


(10)

(2)

ب)

$y = \frac{n-1}{n+2} \Rightarrow R_y = [2, +\infty)$ ✓



$\Rightarrow R_y = [-5, +\infty)$ ✓