

نام و نام خانوادگی: سید محمد حسین نجفی پاسخنامه تشریحی تکلیف شماره کلاس: هفتم دوره اول است

الف) $y = n^2 - a \Rightarrow n = \sqrt{y+a}$ $y \geq -a$
 $\Rightarrow n^2 = y + a$ $R = [-a, +\infty)$

ب) $y = x^w + 1 \Rightarrow y - 1 = x^w \Rightarrow x = \sqrt[w]{y-1}$ موجود و یکتا
به خاطر مرتبه ۳ است
 $R_f = \mathbb{R}$

$$\begin{aligned} \text{الف) } y &= n^p - p n + p \Rightarrow y = (n-p)^p + p \Rightarrow y - p = (n-p)^p \\ \Rightarrow \pm \sqrt[p]{y-p} &= n-p \Rightarrow \pm \sqrt[p]{y-p} + p = n \Rightarrow y \geq p \quad R = [p, +\infty) \end{aligned}$$

[illegible]

$$\Rightarrow y \geq -a/pa \quad R = [-a/pa, +\infty)$$

$\frac{1}{n^N - \sqrt[n]{n}} = y$
 $y n^N - \sqrt[n]{n} = 1$
 $y n^N - \sqrt[n]{n} - 1 = 0$
 $\Rightarrow R = (0, +\infty) \cup (-\infty, -\frac{1}{\sqrt[n]{n}})$
 $\Rightarrow y \neq 0, 14y^N + \sqrt[n]{n} > 0$
 $y(14y + \sqrt[n]{n}) > 0$
 $[0, +\infty) \cup (-\infty, -\frac{1}{\sqrt[n]{n}}]$, $y \neq 0$
 $R = [-V, +\infty)$

$$\begin{aligned} \text{a) } y &= n^N - 4n + N & \text{ext} &= \min & R &= [-V, +\infty) \\ n_{\text{ext}} &= \frac{-b}{2a} = \frac{+4}{2} = 2 & y_{\text{ext}} &= 2^N - 1 \cdot 4 + N = -V & R &= (-\infty, 4] \\ \text{b) } y &= -n^N + 5n & \text{ext} &= \max & \\ n_{\text{ext}} &= \frac{-b}{-2a} = \frac{5}{-2} = -2.5 & y_{\text{ext}} &= -(2.5)^N + 1 \cdot 5 = +4 \end{aligned}$$

$$\sqrt{n^2 - 4n + 1} = y \quad n_{\text{ext}} = \frac{b}{a} = \frac{4}{1} = 4 \quad y_{\text{ext}} = 9 - 16 + 1 = -6$$

$$R = \sqrt{[-6, +\infty)} = [0, +\infty)$$

$$\sqrt{-n^2 + 11n + 10} = y \quad \text{ext} = \max \quad n_{\text{ext}} = \frac{-11}{-2} = 5.5 \quad y_{\text{ext}} = -11 + 11 + 10 = 10$$

$$R = \sqrt{(-\infty, 10]} = [0, \sqrt{10}]$$

$$y = n^4 + 11n^2 + 1n + 1 \quad R_f = \mathbb{R}$$

$$y = \sqrt{n^4 + 11n^2 + 1n + 1} \quad R_f = [0, +\infty)$$

فقط ما زیر را ادیت می‌کنیم $R = \sqrt{(-\infty, +\infty)}$

$$R_f = R - \left\{ \frac{a}{c} \right\}$$

$$\text{الف) } y = \frac{11n + 1}{n - 2} \quad R_f = \mathbb{R} - \left\{ \frac{11}{2} \right\}$$

$$\text{ب) } y = \sqrt{\frac{11n + 1}{n + 11}}$$

$$R_{\text{مستقیم}} = \mathbb{R} - \left\{ \frac{11}{2} \right\}$$

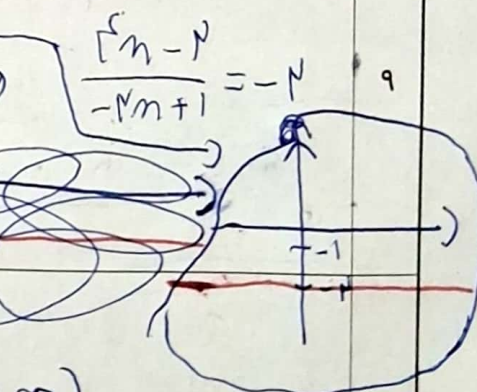
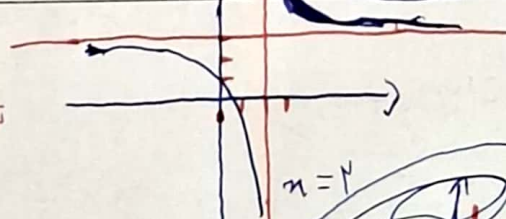
$$R_f = [0, +\infty) - \left\{ \frac{11}{2} \right\}$$

$$\text{الف) } \frac{11n + 1}{n - 2} = y \quad \text{نقطه افقی}$$

$n = 0 \Rightarrow y = -\frac{1}{2}$

$\text{میانبر} = \frac{a}{c} = \frac{11}{1} = 11$

$\text{میانبر افقی} = \frac{a}{c} = \frac{11}{1} = 11$



$$\text{ب) } \frac{11n - 1}{1 - 11n} = y \quad \text{میانبر افقی} = -1$$

$\text{میانبر عمودی} = \frac{1}{11}$

$$y = \cos^2 n + \frac{1}{\cos^2 n} \Rightarrow R = [1, +\infty)$$

$y = \frac{1}{a} + a \quad a > 0$

$$y = \sqrt{\frac{n^2 + 1}{n}} = \sqrt{n + \frac{1}{n}} \Rightarrow$$

$$R = (-\infty, \sqrt{-2}] \cup [\sqrt{2}, +\infty)$$

↓ به دست می‌آید

$$[2, +\infty) \cup (-\infty, -2]$$