

۱۷، ۱۷۵

سازاساسانی - درازدم دختر ب - تالین شماره ۵

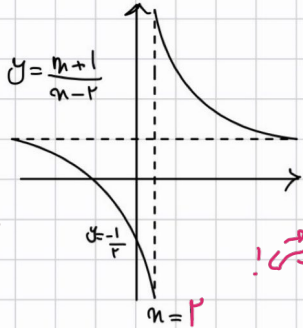
$$y = \frac{|n|+1}{|n|-2}$$

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

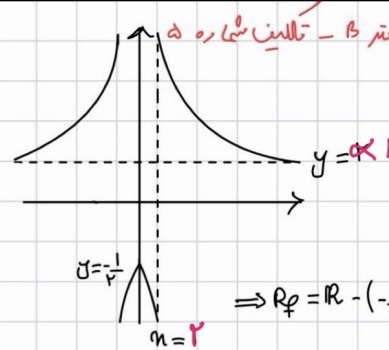
$$y = \frac{|n|+1}{|n|-2}$$

$$y = 2 \text{ جانب قائم}$$

$$y = 1 \text{ جانب افق}$$



بجانب افقی!



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صفت ب؟

صفحه آخر...

$$y = \frac{n^2 + 2n - 2}{n + 3} \rightarrow y(n+3) = n^2 + 2n - 2 \rightarrow n^2 + (3-y)n - 3y - 2 = 0 \rightarrow \frac{y-2 \pm \sqrt{\Delta}}{2}$$

$$\Delta \geq 0 \Rightarrow (3-y)^2 - 4(1)(-3y-2) = y^2 - 6y + 4 + 12y + 8 \Rightarrow y^2 + 6y + 12 = 0 \Rightarrow \frac{-6 \pm \sqrt{36-48}}{2}$$

$$R_f = \mathbb{R} - (-2, -4]$$

$$y = \frac{n^2 - n + 1}{n^2 - n + 1} \rightarrow n^2 - n + 1 \neq 0 \rightarrow \Delta = 1 - 4(1) \rightarrow \Delta < 0 \rightarrow \text{هواره} \rightarrow R_f = \mathbb{R}$$

$$\rightarrow y(n^2 - n + 1) = n^2 - n + 1 \rightarrow n^2(y-1) + n(1-y) + y - 1 = 0$$

$$\Rightarrow \frac{y-1 \pm \sqrt{\Delta}}{2(y-1)} \rightarrow y \neq 1$$

$$\Delta \geq 0 \rightarrow (1-y)^2 - 4(y-1)(y-\frac{1}{y}) \geq 0 \rightarrow (y-1)[y-1-4(y-\frac{1}{y})] \rightarrow (y-1)(-3y) \geq 0 \Rightarrow$$

$$\frac{0}{-1} + \frac{1}{3} - \Rightarrow R_f = [0, 1)$$

$$\text{الف)} y = \sqrt{-n^2 + 4n - 1} \rightarrow \text{ent} \left| \frac{-b}{2a} \right| \rightarrow \text{ent} \left| \frac{2}{-2} \right| \rightarrow \text{بردهته} = (-\infty, 3] \rightarrow R_f = [3, 3]$$

$$\text{ب)} y = \sqrt[3]{2n^2 - 11n} \rightarrow \text{ent} \left| \frac{2}{-11} \right| \rightarrow \text{بردهته} = [-11, +\infty) \Rightarrow R_f = [-2, +\infty)$$

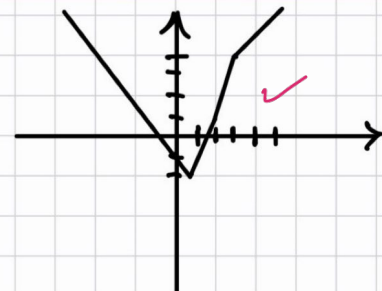
$$\text{الف)} y = \log(n^2 - n + 11) \rightarrow \text{بردهته} = (-\infty, +\infty) \Rightarrow R_f = \mathbb{R}$$

$$\text{ب)} y = \log_2\left(\frac{n^2+1}{n}\right) \rightarrow \frac{n^2+1}{n} = n + \frac{1}{n} \rightarrow \text{بردهته} = [2, +\infty) \rightarrow \log_2[2, +\infty) \Rightarrow R_f = [1, +\infty)$$

$$\text{الف)} y = |2n-2| - |n-3|$$

1	3
-n-1	n+1

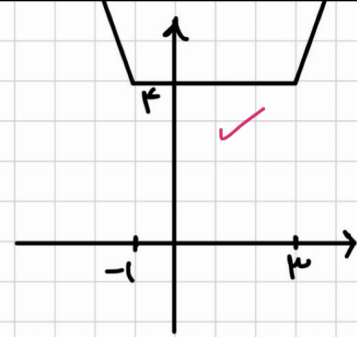
$$\Rightarrow R_f = [-2, +\infty)$$



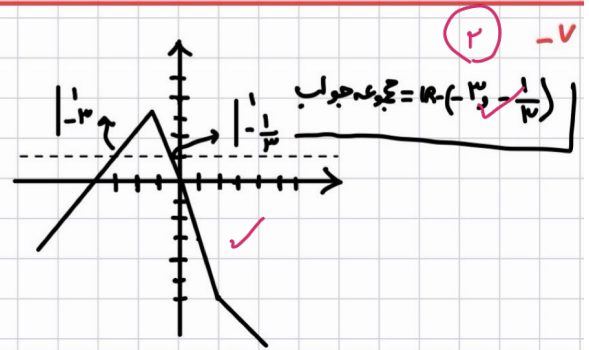
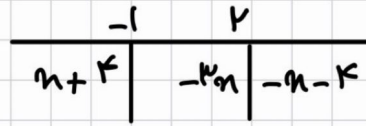
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ب) $y = |n-2| + |n+1| \rightarrow 2 - (-1) = 3$

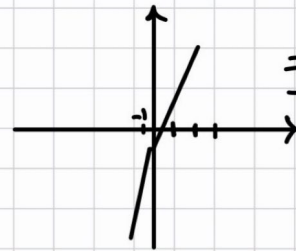
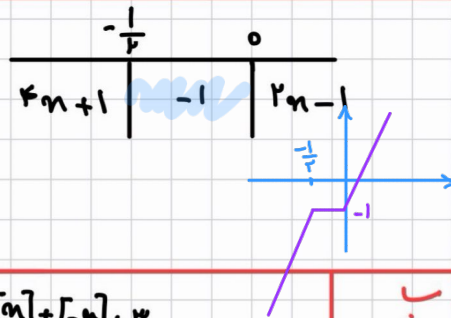
$R_f = [3, +\infty)$ $\Leftarrow$



$|n-2| - |2n+2| \leq 1$

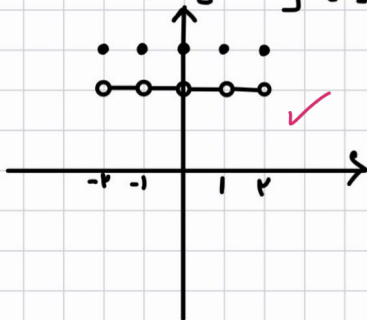


$y = 3n - |2n+1| + |n|$



$\Rightarrow R_f = \mathbb{R}$

الف) $y = [n] + [2-n] = [n] + [-n] + 2$

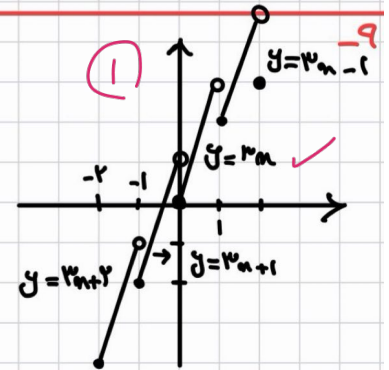


$R_y = \{2, 3\}$

ب) $y = 3n - [n]$

برد از خواصیم

$R_y = [-1, \infty)$



الف) $y = \sin^2 n - \sin n + 1 \rightarrow \sin n = 1 \rightarrow 1 - 1 + 1 = 1$

$\rightarrow \sin n = -1 \rightarrow 1 + 1 + 1 = 3 \Rightarrow R_f = [\frac{1}{2}, 3]$

$-\frac{b}{r_a} = \frac{1}{2} \rightarrow \frac{1}{2} - \frac{1}{2} + 1 = \frac{1}{2}$

ب) $y = \sin^2 n + \sin^2 n + 1 \rightarrow \sin^2 n = 1 \rightarrow 1 + 1 + 1 = 3$

$\rightarrow \sin^2 n = 0 \rightarrow 0 + 0 + 1 = 1 \Rightarrow R_f = [1, 3]$

$-\frac{b}{r_a} = -\frac{1}{2} \rightarrow \text{غنی}$

$R_f = [\frac{1}{2}, 3]$

$$\text{ب) } y = |n| + \frac{1}{|n|} \xrightarrow[\alpha + \frac{1}{\alpha} \geq r]{\alpha > 0} |n| + \frac{1}{|n|} \geq r \rightarrow R_y = [r, +\infty)$$

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