

بازیم رفته B

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شماره تکلیف ۱

استقره مدارک

$$\sin(u) = 2 \sin^2(u + \frac{\pi}{4}) - 1$$

$$-1 \leq \sin(u + \frac{\pi}{4}) \leq 1 \rightarrow -1 \leq \sin^2(u + \frac{\pi}{4}) \leq 1$$

$$0 \leq 2 \sin^2(u + \frac{\pi}{4}) \leq 2 \rightarrow -1 \leq 2 \sin^2(u + \frac{\pi}{4}) \leq 1$$

$$R_f = [-1, 1]$$

$$g(u) = 2 \cos^2 u - 2$$

$$-1 \leq \cos u \leq 1 \rightarrow -1 \leq \cos^2 u \leq 1$$

$$-2 \leq 2 \cos^2 u - 2 \leq 0 \rightarrow -2 \leq 2 \cos^2 u - 2 \leq 0$$

$$R_f = [-2, 0]$$

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$$y = \frac{n}{n+1} + [-n]$$

$$-2 \leq n < -1 \rightarrow [n] = -2 \rightarrow y = -1 - 2 = -3$$

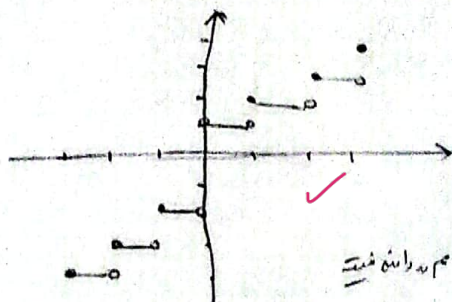
$$-1 \leq n < 0 \rightarrow [n] = -1 \rightarrow y = -1 - 1 = -2$$

$$0 \leq n < 1 \rightarrow [n] = 0 \rightarrow y = 1$$

$$1 \leq n < 2 \rightarrow [n] = 1 \rightarrow y = 1 + 1 = 2$$

$$2 \leq n < 3 \rightarrow [n] = 2 \rightarrow y = 1 + 2 = 3$$

$$n = 3 \rightarrow [n] = 3 \rightarrow y = 1 + 3 = 4$$



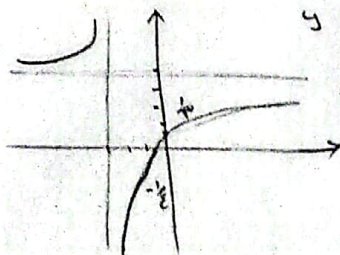
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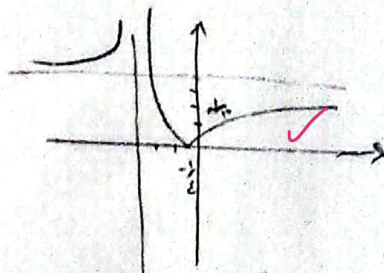
2

$$y = \left| \frac{n+1}{n+2} \right| \rightarrow \begin{cases} \frac{n+1}{n+2} \geq 0 \\ \frac{n+1}{n+2} < 0 \end{cases}$$

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



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



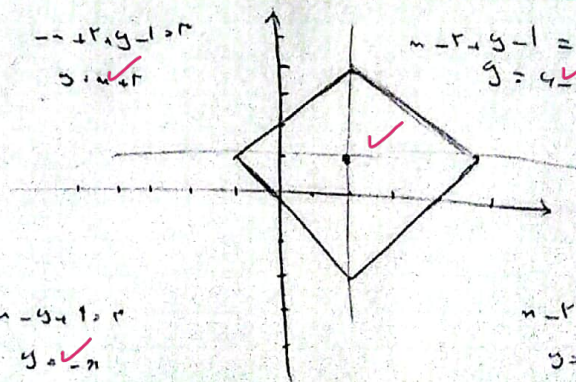
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$$|x-2| + |y+1| = 3$$

$$-x+2, y+1 \geq 0 \rightarrow y = -x+2$$

$$x-2, y+1 \geq 0 \rightarrow y = x-1$$



$$x-2, y+1 < 0 \rightarrow y = -x$$

$$-x+2, y+1 < 0 \rightarrow y = x-3$$

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$$f(u) = u + \frac{1}{u} + 2 \sqrt{u - \frac{1}{u}} \rightarrow u + \frac{1}{u} \geq 2$$

$$f(u) = (\sqrt{u + \frac{1}{u}})^2 + 2 \sqrt{u - \frac{1}{u}} = \sqrt{u + \frac{1}{u}}$$

$$f(u) = \sqrt{u + \frac{1}{u}}$$

$$g(u) = (2 - \sin u)(1 + \sin u) \rightarrow$$

$$- \sin^2 u + 2 \sin u + 2 \rightarrow \sin u$$

$$-1 \leq \sin u \leq 1 \rightarrow -1 \leq \sin u \leq 1$$

$$0 \leq 2 \sin u + 2 \leq 4$$

$$R_f = [0, 4]$$

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$$R_f = [2 + 2\sqrt{2}, +\infty)$$

$$-\frac{1}{r} \times 1 + 1. + -\frac{1}{r} \times r + 1. + \dots + -\frac{1}{r} \times 9 + 1. = -\frac{1}{r} (1 + r + \dots + 9) + 9 \times 1. \quad (2)$$

$$28 \times -\frac{1}{r} + 9. = \underline{\underline{\sqrt{61}}}$$

$$\frac{946}{r} = 2.11$$

$$g(u) = \sqrt{b_u^T + a_u - r_c} \rightarrow$$

$$\theta(\cdot) = \sqrt{u^2 + \varepsilon}$$

$$y' = u^2 + \varepsilon \Rightarrow \int \frac{1}{u^2 + \varepsilon} = \arctan \frac{u}{\sqrt{\varepsilon}} = \arctan \frac{y}{\sqrt{\varepsilon}}$$

$$R_{y2}[\epsilon, +\infty) \Rightarrow R_{y2}[\gamma, +\infty)$$

$$f(x) = \frac{x^2 - 2x}{x + 2} \rightarrow \frac{x(x - 2)}{x + 2} \Rightarrow \frac{x(x - 2)(x + 2)}{x + 2} \rightarrow f(x) = x^2 - 2x$$

$f_{(-1)} = (-1)^T - 1 \times -1 = 1 \Rightarrow u^T - v = 1 \Rightarrow (u+1)(u-1) = 1$ $R_L, R = \{-1, 1\}$
 $R_{L-1} = 2L-1, 2u^T - v \rightarrow \int_{-1}^1$ $a_1 = -1$ $b_1 = 1$
 $a_2 = -1$ $\Rightarrow R_L = [-1, +\infty) - f(x)$ $f(\frac{a+b}{2}) = f(\frac{-1+1}{2}) = f(0)$
 $f_{(-1)} = (-1)^T - 1 \times -1 = 1$

$$y = \sqrt{a^2 + b^2 - 1} \Rightarrow y = r \sqrt{(n-1)^2} \Rightarrow y = r \sqrt{n^2 - 1}$$

a. -1
b. 1/2

$$\rho_g: [a, b) \rightarrow \rho_g: [-1, 1] \quad -1 \leq u \leq 1$$

$$-1 \leq r \leq +1 \rightarrow R_f = [-1, 1]$$

$$u_2 [-] + [u + \frac{1}{r}]$$

$$\frac{1}{r} \leq n < 1 \Rightarrow 1 \leq n + \frac{1}{r} < \frac{n}{r} \Rightarrow [n] = 0, [n + \frac{1}{r}] = 1 \Rightarrow n \neq 1$$

$$1 \leq n < \frac{p}{r} \Rightarrow \frac{p}{r} < n + \frac{1}{r} < r \Rightarrow (-) \neq 1 \quad [n + \frac{1}{r}] = 1 \rightarrow 1, 1 \neq r$$

$$\frac{1}{r} \leq u < r \Rightarrow r \leq 2 + \frac{1}{r} < \frac{\delta}{r} \Rightarrow (u) = 1 \quad (2 + \frac{1}{r}), \quad r \Rightarrow 1 + 2/r$$

