

Date:

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امروز اسامی تکلیف ✓ (روز دوم) سر A

$$1) \quad -2 \leq \frac{3x+1}{5} \leq 2 \rightsquigarrow -10 \leq 3x+1 \leq 10$$

$$-12 \leq 3x \leq 9 \wedge \rightsquigarrow -4 \leq x \leq 3 \Rightarrow D_f = [-4, 3]$$

راسته را در سه جا گزینیم

$$2) \quad x_{\min} = 3(-2) - 2 = -8 \quad / \quad x_{\max} = 3(3) - 2 = 7$$

$$D_f = [-8, 7]$$

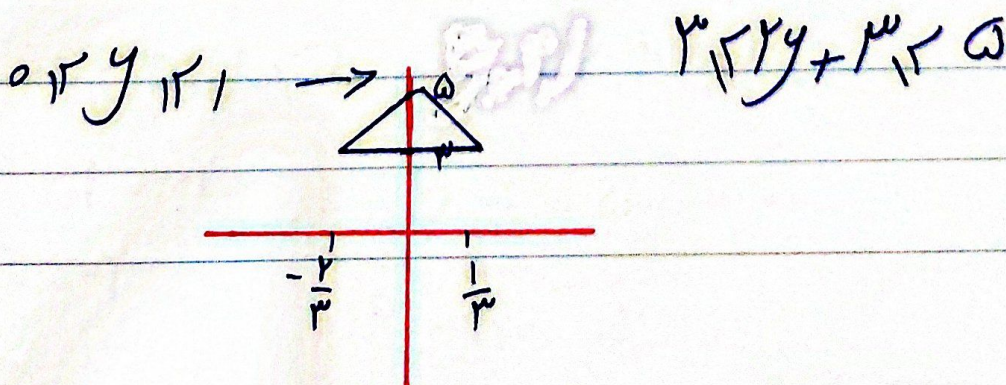
$$3) \quad D_f = x_{\min} = \frac{3(-1) + 1}{2} = -1 \quad \rightarrow D_f = [-1, 0]$$

$$x_{\max} = \frac{3(3) + 1}{2} = 5$$

$$\rightarrow -1 \leq 2 - 5x \leq 5 \rightarrow -\frac{3}{5} \leq x \leq \frac{3}{5}$$

$$\left(-\frac{3}{5}, \frac{3}{5}\right]$$

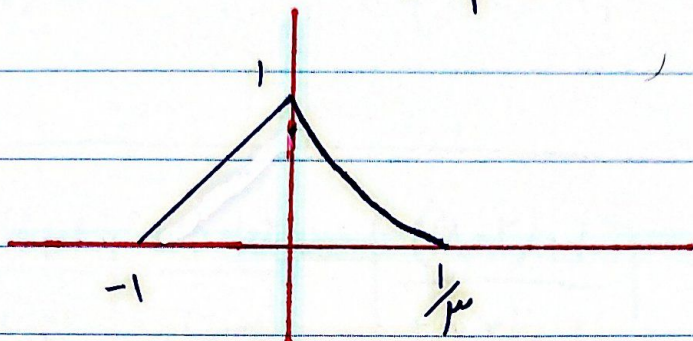
$$4) \quad -1 \leq 3x+1 \leq 2 \rightsquigarrow -\frac{2}{3} \leq x \leq \frac{1}{3}$$



3)

$$1 \leq x-1 \leq 0 \rightarrow -1 \leq x \leq \frac{1}{\mu}$$

$$0 \leq y \leq 1 \rightsquigarrow 0 \leq \frac{y}{\mu} \leq 1$$



4)

$$a(x-y)^r + r \rightsquigarrow a = -\frac{1}{\mu} \quad -\frac{1}{\mu}(x-y)^r + r = 0$$

$$\hookrightarrow \frac{-x^r + \lambda x - r}{\mu} = 0 \rightsquigarrow x = 1, \sqrt{r}$$

$$a(x-a)^r + b$$

از فرمول Ext (a,b) ، نمودار رسم است

✓)

$$x = 1 \rightsquigarrow_{\max} \quad \mu x + r = 1 \rightsquigarrow_{\max} \quad x = -\frac{1}{\mu}$$

$$J_{\max} = r \rightsquigarrow 1 - ry \rightsquigarrow 1 - \lambda = -r$$

$$A: \left(-\frac{1}{\mu}, -r\right) \rightsquigarrow \alpha \cdot \beta = \frac{r}{\mu}$$

1)

$$a \leq x-1 \leq r \rightarrow a+1 \leq x \leq a \quad (-r, 0)$$

$$-1 \leq x+1 \leq b \rightarrow -r \leq x \leq b-1$$

$$\hookrightarrow \begin{cases} a+1 = -r \\ a = -r \end{cases}$$

$$b-1 = 0 \rightarrow b = 1$$

$$a-b = -1$$

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$$Df = \left[-\frac{x}{r} + 1, \frac{y}{r} + 1 \right] = \left[-\frac{1}{r}, \frac{\sqrt{5}}{r} \right]$$

$$-1.5 f(n) \leq r \leadsto 0.5 |rf(n) - 1| \leq \sqrt{5} \leadsto Rf = [0, \sqrt{5}]$$

١٥) $\left| \frac{n+1}{rn+1} \right| \xrightarrow[\text{رأس}]{\text{مقام}} \left| \frac{(n-1)+1}{r(n-1)+1} \right| \xrightarrow[\text{لا}]{\text{مقام واحد}} \left| \frac{n-1}{rn-1} \right| + 1$

$$\hookrightarrow f(n) + n = \left| \frac{n-1}{rn-1} \right| + \underline{n+1} < 0 \rightarrow n+1 < \frac{n-1}{rn-1} < n-1$$

$$\rightarrow \frac{n-1}{rn-1} < n-1 \leadsto n \in (-\infty, -\sqrt{r}) \cup (\sqrt{r}, \frac{r}{r})$$

$$\rightarrow n+1 < \frac{n-1}{rn-1} \leadsto n \in (-\infty, \frac{1-\sqrt{5}}{r}) \cup (\frac{r}{r}, \frac{1+\sqrt{5}}{r})$$

$$\text{اشتراب} = (-\infty, -\sqrt{r})$$