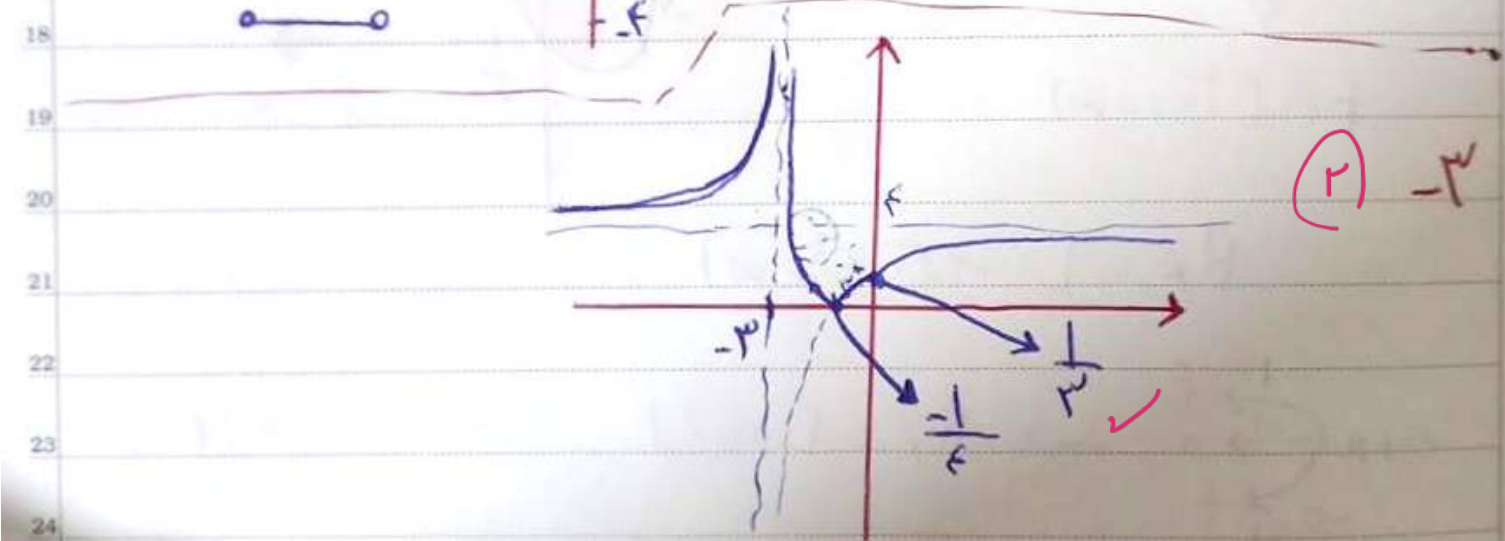
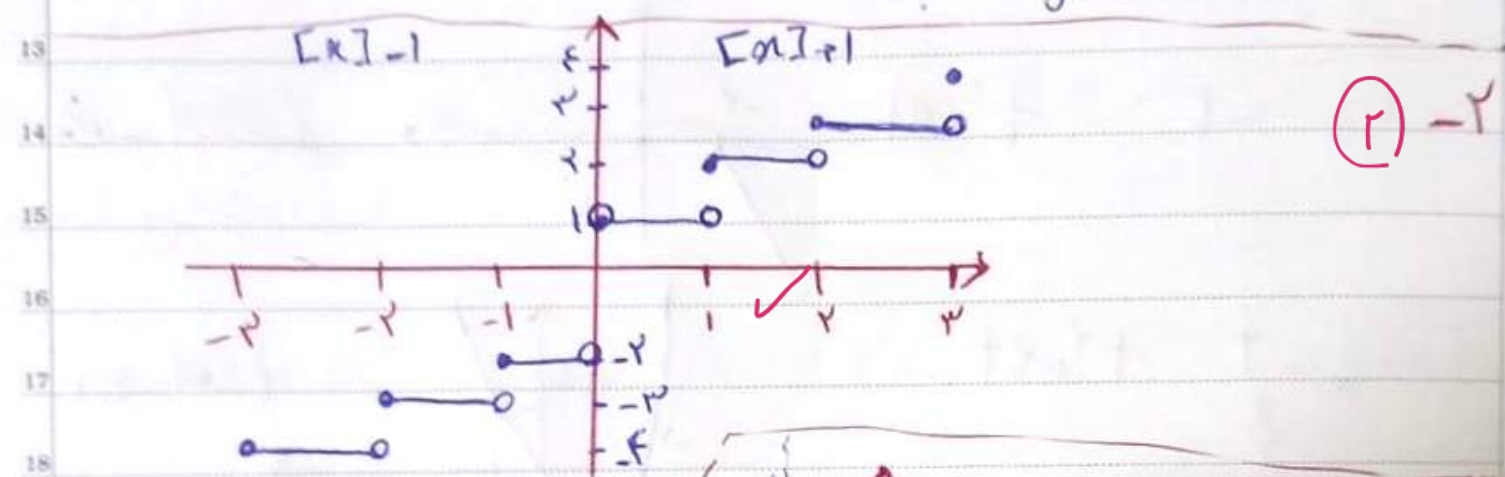


۱۸, ۷۵ (۱۸, ۷۵) ۱۸, ۷۵

min  $\Rightarrow x(0) - 1 = -1$  max  $\Rightarrow x(1) - 1 = 1 \Rightarrow R_f = [-1, 1]$  (الف)

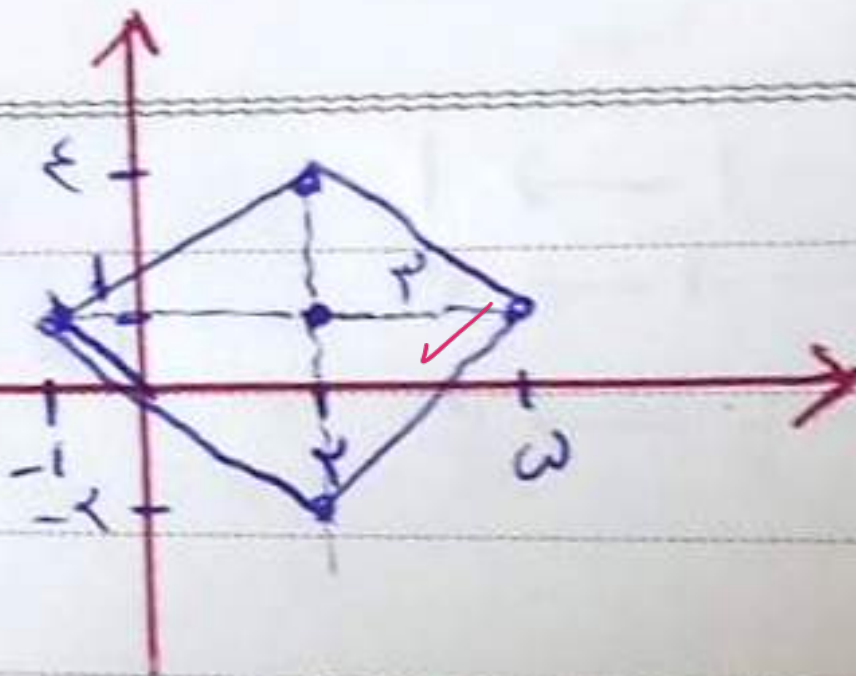
min  $\Rightarrow x(-1) - 1 = -1$  max  $\Rightarrow x(1) - 1 = 1 \Rightarrow R_g = [-1, 1]$  (ب)



Year. ....

مثلاً در ربع

مثلاً در حوض رفتن



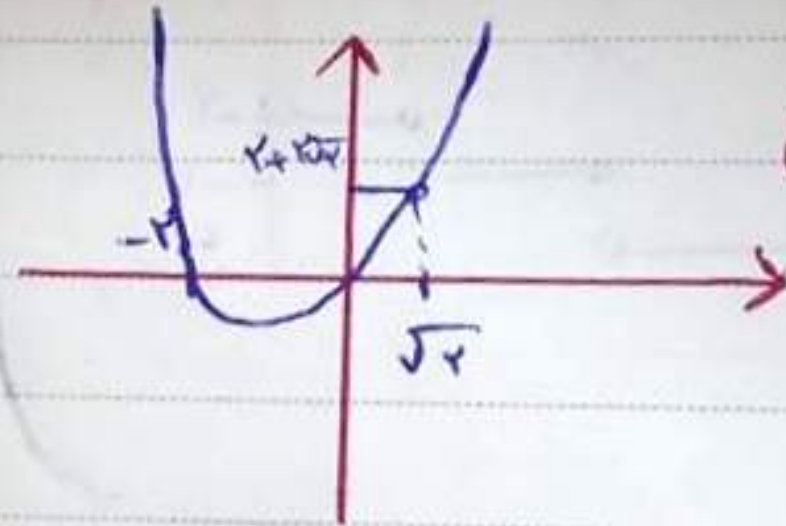
①

با ضربه بندی !!

$$\sqrt{x + \frac{1}{x}} \leq t \quad + \sqrt{x} + \frac{1}{\sqrt{x}}$$

$\Downarrow$

$$t \in [\sqrt{x}, +\infty)$$



(د-الف)

(2)

$$R_f \leq [1 + \sqrt{x}, +\infty)$$

$$\sin \left( \begin{array}{c} \xrightarrow{1} f \\ \xrightarrow{-1} 0 \\ \xrightarrow{\frac{-b}{2a}} f \end{array} \right) \Rightarrow R_f \leq [0, f]$$

(ج)

Day. Month. Year.

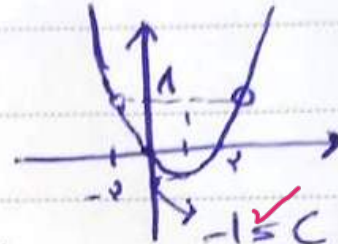
$$\frac{1}{x} \left( \frac{9 \times 10}{x} \right) + 6 \times 9 = 90 + (-10) = \underline{V0}$$

(r) -4

$$ax^2+bx+c \Rightarrow \text{discriminant} \Rightarrow a > 0 \quad \left. \begin{array}{l} yb+c \leq 0 \\ yb+c \leq 1 \end{array} \right\} \Rightarrow \begin{array}{l} b \leq 1 \\ c \leq -1 \end{array} \quad \textcircled{r} -V$$

$$\sqrt{x^2+f} \Rightarrow R_f = [1, +\infty)$$

$$\frac{x(x-1)(x+1)}{x+1} = x^2 - x$$



$$f\left(\frac{1}{-1}\right) = f(-1) = 1 + 1 = 2$$

$$\underline{-1 \leq c} \quad \underline{a = -1} \quad \underline{b = 1}$$

$$\textcircled{r} \rightarrow 1$$

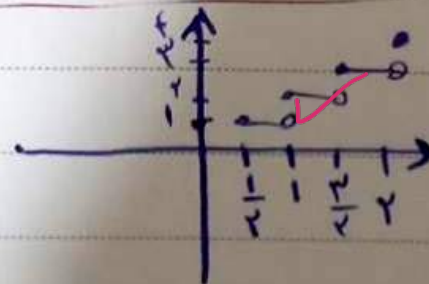
$$(x-1)^3 = x^3 - 3x^2 + 3x - 1 \Rightarrow f \leq x-1$$

$$\textcircled{r} -9$$

$$a \leq -1 \quad b \leq 1 \Rightarrow D_f = [-1, 1] \quad \begin{array}{l} f(a) \leq -1 \\ f(b) \leq 1 \end{array}$$

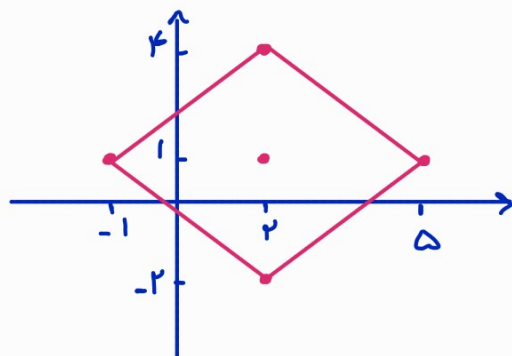
$$R_f = [-1, 1]$$

$$[x] + [x + \frac{1}{2}] = [2x]$$



$$\textcircled{r} \rightarrow 10$$

$$\begin{cases} x \geq 1, y \geq 1 \rightarrow y = -x + 4 \\ x \geq 1, y \leq 1 \rightarrow y = x - 1 \\ x \leq 1, y \geq 1 \rightarrow y = x + 1 \\ x \leq 1, y \leq 1 \rightarrow y = -x \end{cases}$$



-1