

V.O

محل های ممکن

Year: Month: Day:

D: $1 - x^2 \geq 0 \rightarrow x^2 \leq 1 \rightarrow -1 \leq x \leq 1$ (1)
 $R \rightarrow x_s = \frac{-b}{2a} = 0, y_s = 1 \rightarrow (-\infty, 1] \xrightarrow{\text{بالای شیب}} R = \{1\}$ (0)

$g \rightarrow \{(-1, 1), (0, 1), (1, 0), (1, 1)\}$

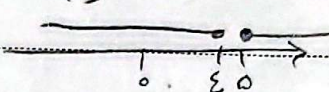
$f \leftarrow (-1, 1), (1, 1), (0, 1)$

$g - f = \{(-1, -1), (1, 1), (0, 0)\}$

فرض کنیم که x و y در R باشند (2)

$f(x) = 1 = 0 \rightarrow R = (0, +\infty)$

$\frac{1}{2} f(x) + x = 1 \rightarrow R = (-\infty, 1]$



$R_f \cup R_g = (-\infty, 1] \cup (0, +\infty)$

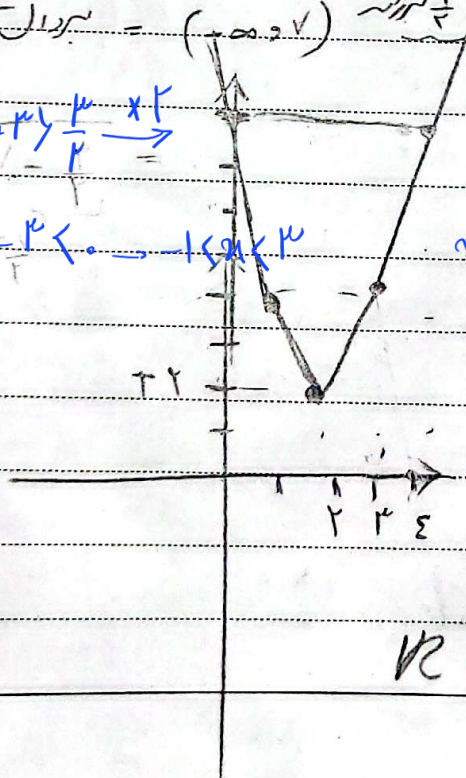
محل های ممکن $y = -x^2 + 2x + 4$ $x_s = \frac{-b}{2a} = \frac{-2}{-2} = 1$ (3)

$y_s = -(1)^2 + 2(1) + 4 = 5$ (0)

$\Delta = b^2 - 4ac = 4 - 4(-1)(4) = 20$
 $\sqrt{\Delta} = \sqrt{20} = 2\sqrt{5}$
 $x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{2 \pm 2\sqrt{5}}{-2} = -1 \pm \sqrt{5}$

$\frac{-2 \pm 2\sqrt{5}}{-2} = 1 \pm \sqrt{5}$

$x^2 - 2x - 4 < 0 \rightarrow -1 < x < 3$ $\sqrt{b^2 - 4ac} = 4$



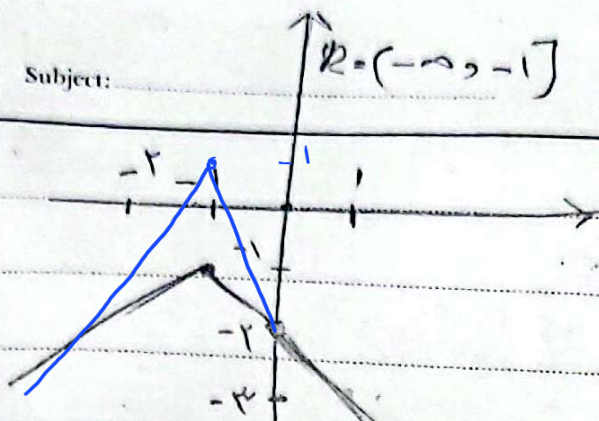
$\begin{cases} x > 3 \\ -x^2 + 2x + 4 < 0 \\ x < -1 \end{cases}$ (5)

$R = (3, +\infty)$ (+1) $\rightarrow$ $\rightarrow$

Subject:

$$f(x) = \begin{cases} -x-1 & x > 0 \\ -x-1 & -1 \leq x \leq 1 \\ x+1 & x < -1 \end{cases}$$

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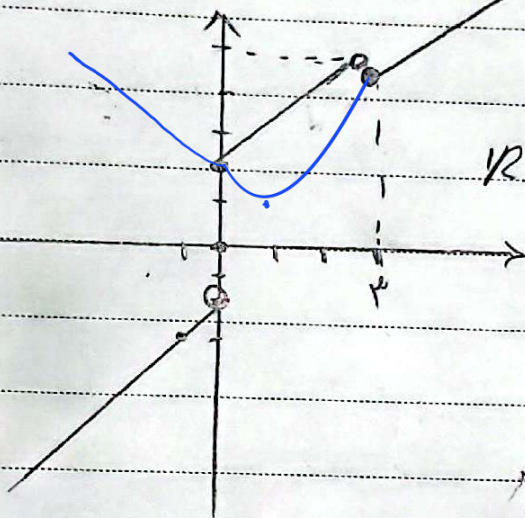


$$\begin{array}{c|c|c} x+1 & -x-1 & -x-1 \\ \hline x+1 & -x-1 & -x-1 \end{array}$$

$$R = (-\infty, 1]$$

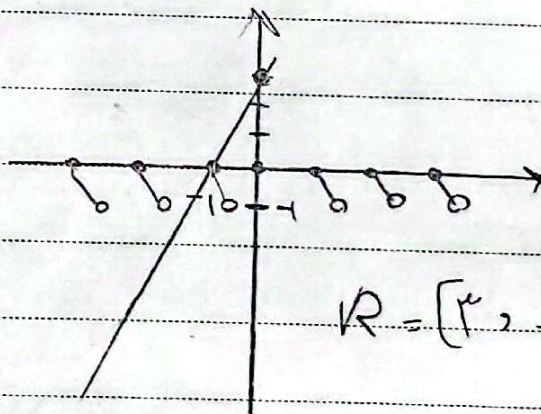
$$y = \frac{(x+1)(x+1)}{(x+1)}$$

$$1 + x = 0$$



$$R = (-\infty, -1) \cup [1, +\infty)$$

$$R = [1, +\infty)$$



$$R = [1, +\infty)$$

$$x+1 \geq 0 \Rightarrow x \geq -1$$

$$a+1 - \sqrt{x(-\frac{x}{x}) + c} = 0$$

$$a+1=0$$

$$a = -1$$

$$x = \frac{x}{x} = -4$$

$$\begin{array}{l} x+1 \geq 0 \rightarrow x \geq -1 \\ 1-x \geq 0 \rightarrow x \leq 1 \end{array} \Rightarrow -1 \leq x \leq 1$$

$$D = \{-1, 0, 1\} \quad 2g - 2f = \{(-1, 2)(1, 4)(0, 5)\} \rightarrow 2 + 4 + 5 = 11 \quad (1)$$

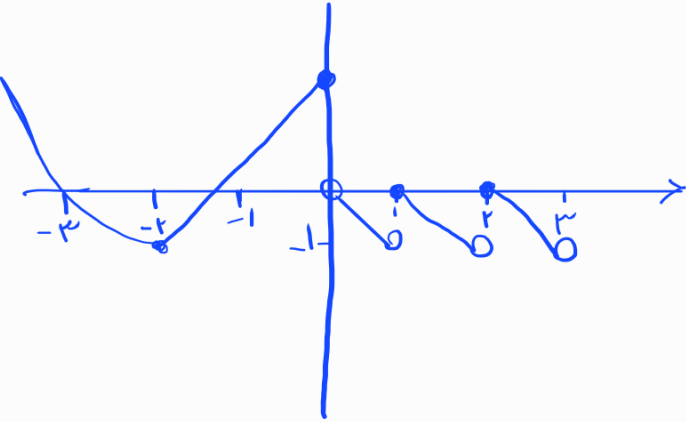
$$2x^2 + (2-y)x + 11-y = 0 \rightarrow x = \frac{y-2 \pm \sqrt{(2-y)^2 - 4(11-y)}}{2} \rightarrow \geq 0 \quad (4)$$

$$0 < 0 \rightarrow 1 > 0$$

$$0 < 0 \rightarrow m < 4 \rightarrow$$

m نهاره نه بزرگتر از 4 باشد

$$m = 1, 2, 3$$



$$R = [-1, +\infty)$$

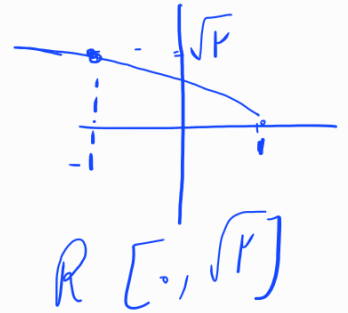
(1)

$$f(m) + g(m) = 2\sqrt{1+2} + 2\sqrt{1-2} \xrightarrow{\text{نیمه مربع}} 2(\sqrt{1+2} + \sqrt{1-2})$$

$$\rightarrow g(m) = \sqrt{1+2} - \sqrt{1-2}$$

$$2(\sqrt{1-2} + \sqrt{1+2}) \xrightarrow{\text{نیمه مربع}} 2(\sqrt{1-2} + \sqrt{1+2}) \quad (1)$$

$$\frac{f(m)}{4} - \frac{g(m)}{2} = \sqrt{1-2}$$



$$R = [-1, \sqrt{2}]$$