

Subject: الفيزياء (مادة)

المعلم

كتاب مدرسي

Year: Month: Date: ()

1 $R_f - R_g = \{(-1, 2), (0, 4), (1, 2)\}$ $f(x) = \sqrt{1-x^2}$ ①

2

3 $R_g = \{(-1, 2), (0, 4), (1, 2)\}$

4

5 $R_f = \{(-1, 0), (0, 1), (1, 0)\}$

6

7 $R_g - R_f = \{(-1, 2), (0, 4), (1, 2)\}$ $x + y = 4$ ②

8

9

10 $g(x) = \frac{1}{x} + 3$ $x \in [3, +\infty)$ $f(x) = x - 1$ $x \in (-\infty, 3]$ ③

11 $x = 3 \rightarrow y = 4$ $y = 3 \rightarrow x = 3$ g, f متعاكسان

12

13 $R_f = [3, +\infty)$

14 $R_g \cup R_f = (-\infty, 3] \cup [3, +\infty)$

15 $R_g = (-\infty, 3]$

16

17 $y = \frac{-x^2}{r} + x + 3$ (a, b) $\frac{r}{b-a}$ $\sqrt{b-a}$ ④

18 $\sqrt{b-a}$ $\frac{r}{b-a}$

19

20 $\frac{-x^2}{r} + x + 3 > \frac{r}{b-a}$

21

22 $\frac{-x^2}{r} + x + \frac{r}{b-a} > 0 \rightarrow \frac{-x^2}{r} + x + 3 > 0$

23

24 $\frac{-x^2}{r} + x + 3 > 0$

25 $(a, b) = (-3, 1)$

26 $\sqrt{b-a} = \sqrt{1+3} = 2$

27

28

29

Year :

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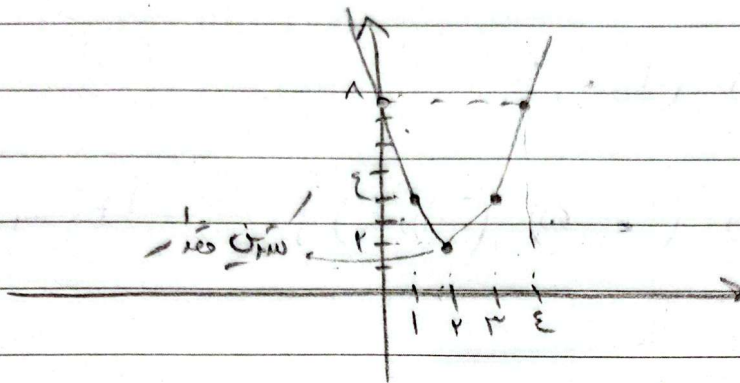
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④ کترین مقدار $y = |x-1| + |x-3| + |x-4|$

$$x=1 \rightarrow y=2$$

$$x=3 \rightarrow y=2$$

$$x=4 \rightarrow y=2$$



$$x=3 \rightarrow y=2$$

$$x=4 \rightarrow y=2$$

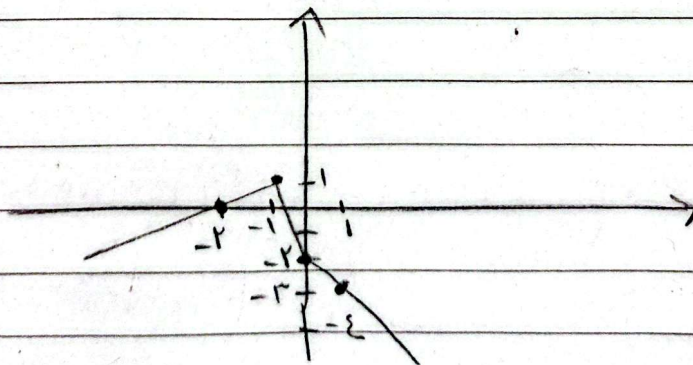
⑤ کترین مقدار $y = |x| - 2|x+1|$

⑤ بر مایع $y = |x| - 2|x+1|$

$$x=0$$

$$x=-1$$

$$\begin{array}{c|c|c} -x + 2x + 2 = x + 2 & -x - 2x - 2 = -3x - 2 & x - 2x - 2 = -x - 2 \\ \hline \textcircled{1} & \textcircled{-1} & \end{array}$$



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

$$m = \{1, 2, 3\}$$

2

(۶) به ازای چند عدد طبیعی m برد کساج

$$\frac{(n+1)(n+2)}{n+1}$$



$$n = 1$$

$R = \{3\}$

$$m \neq -1 \Rightarrow \gamma \neq \mu$$

$$y^n + y - x^r - a_{n-m} = 0 \rightarrow -x^r + x(y-a) + y-m = 0$$

$$x = a - y \pm \sqrt{(y-a)^2 + z(y-m)}$$

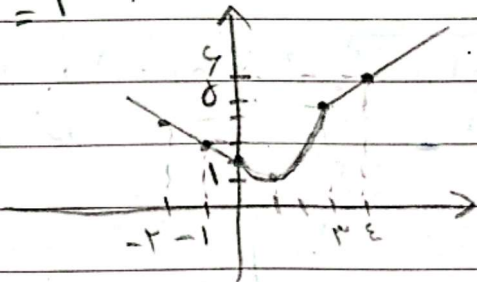
$$\rightarrow y'' + (a-1)y + \{y - \{m\} \} = 0$$

$$\rightarrow y^T - y + (a - r_m) \cdot \frac{\Delta R}{R} = 14 - 15(10 - 10) \cdot 1\% \rightarrow -7\% + 14\% = 7\%$$

$$\rightarrow m \leq 3 \rightarrow m = \{1, 2, 3\}$$

$$f(n) = \begin{cases} 1, 2, 3 \\ n+1 & n \neq 1 \\ n-1 & n \neq 2 \end{cases}$$

$$\min \quad \frac{-b}{1 - \frac{1}{P} + \frac{1}{P}} = 1$$

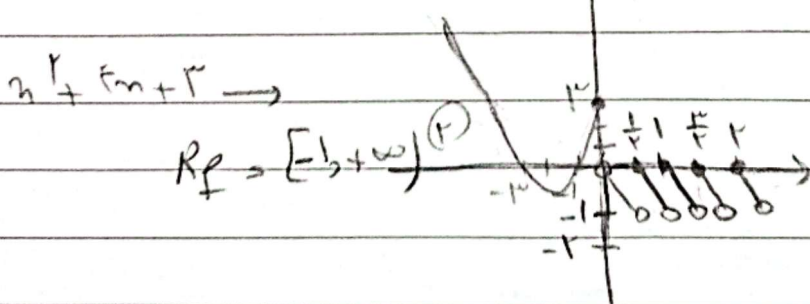


$$R_f = [1, +\infty)$$

$$f(n) = \begin{cases} n^2 + (n+1) & n \text{ is even} \\ (n-1) - n & n \text{ is odd} \end{cases}$$

١) برتاج

$$\{r_n\} - r_n \rightarrow R_f = (-1, 0] \quad \textcircled{1}$$



$$\textcircled{1} \forall x \Rightarrow R \quad p = [-1, +\infty)$$

$$(-\infty, a], [b, +\infty) \text{ için } y = a + 1 - \sqrt{t+1} \text{ için, } a, b \text{ bul} \quad (9)$$

$$t+1 \geq 0 \rightarrow t \geq -1 \rightarrow x \geq -\frac{1}{4}$$

$$D_f = [b, +\infty) \Rightarrow b = -\frac{1}{4}$$

$$x = -\frac{1}{4} \rightarrow y = a \Rightarrow a = a + 1 - 0$$

$$a = 1$$

$$a \times b = 1 \times -\frac{1}{4} = -\frac{1}{4}$$

$$f(x) + g(x) = 1 + \sqrt{1+x^2}, \quad f(x) = 1 + \sqrt{1+x^2} + 1 + \sqrt{1-x^2} \quad (1)$$

$$y = \frac{f(x)}{4} - \frac{g(x)}{4} \quad \text{çünkü } D_f = D_g$$

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

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

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

$$= 1 + (\sqrt{1+x^2} + \sqrt{1-x^2}) \rightarrow \begin{cases} 1+x^2 \geq 0 \rightarrow x \geq -1 \\ 1-x^2 \geq 0 \rightarrow 1 \geq x \end{cases} \quad (1)$$

$$\Rightarrow g(x) = \sqrt{1+x^2} - \sqrt{1-x^2} \rightarrow D_g = [-1, 1]$$

$$y = \frac{f(x)}{4} - \frac{g(x)}{4} = \frac{1 + \sqrt{1+x^2}}{4} + \frac{1 + \sqrt{1-x^2}}{4} - \frac{1 + \sqrt{1+x^2}}{4} + \frac{1 + \sqrt{1-x^2}}{4} = \sqrt{1-x^2}$$

$$x = 1 \rightarrow y = 0$$

$$x = -1 \rightarrow y = \sqrt{2}$$

$$R = [0, \sqrt{2}]$$

$$1-x^2 \geq 0 \Rightarrow x \leq 1$$

$$1-x^2 \geq 0 \Rightarrow x \geq -1$$

$$D_f \cap D_g = [-1, 1] = D$$