

تکلیف ها

پایه دهم ریاضی

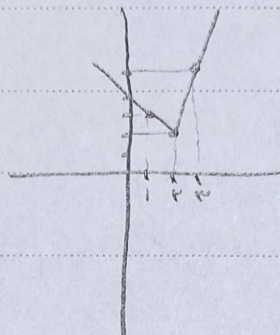
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سختی کم

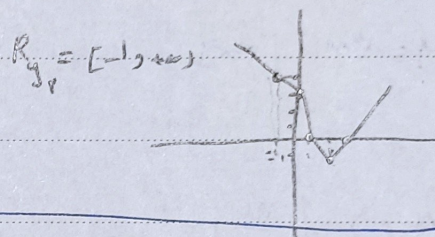
$\rightarrow m=1 \rightarrow m=1$
 $dy = m + |2m - 1|$

$y = |m-1| + |m-1| - |m|$

$m = 1 \rightarrow y = 1 + |2 \cdot 1 - 1| = 2$
 $m = 0 \rightarrow y = 0 + |2 \cdot 0 - 1| = 1$
 $m = 2 \rightarrow y = 2 + |2 \cdot 2 - 1| = 5$
 $m = -1 \rightarrow y = -1 + |2 \cdot (-1) - 1| = 3$
 $R_{y_1} = [1, +\infty)$



$m = 1 \rightarrow y = 1 + |2 \cdot 1 - 1| = 2$
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 $R_{y_1} = [1, +\infty)$



$|2m-1| + |m+1| = 1$

$f(x) = -1 \rightarrow k = -1$

$m = 1 \rightarrow y = 1 + |2 \cdot 1 - 1| = 2$
 $m = 0 \rightarrow y = 0 + |2 \cdot 0 - 1| = 1$
 $m = 2 \rightarrow y = 2 + |2 \cdot 2 - 1| = 5$
 $m = -1 \rightarrow y = -1 + |2 \cdot (-1) - 1| = 3$
 $R_{y_1} = [1, +\infty)$

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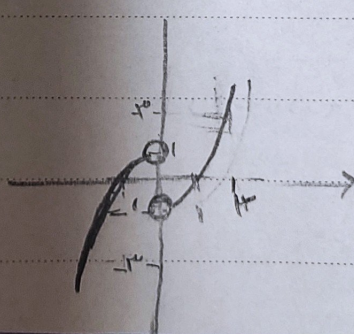
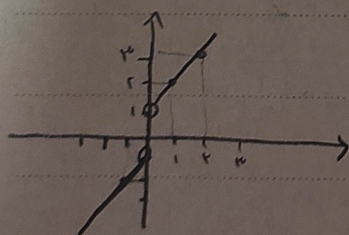
$y = m + \frac{m}{|m|}$

$y = m + \frac{m}{|m|}$

$m = 1 \rightarrow y = 1 + \frac{1}{1} = 2$
 $m = 0 \rightarrow y = 0 + \frac{0}{0} = 0$
 $m = 2 \rightarrow y = 2 + \frac{2}{2} = 3$
 $m = -1 \rightarrow y = -1 + \frac{-1}{-1} = 0$

$m = 1 \rightarrow y = 1 + \frac{1}{1} = 2$
 $m = 0 \rightarrow y = 0 + \frac{0}{0} = 0$
 $m = 2 \rightarrow y = 2 + \frac{2}{2} = 3$
 $m = -1 \rightarrow y = -1 + \frac{-1}{-1} = 0$

$m = 1 \rightarrow y = 1 + \frac{1}{1} = 2$
 $m = 0 \rightarrow y = 0 + \frac{0}{0} = 0$
 $m = 2 \rightarrow y = 2 + \frac{2}{2} = 3$
 $m = -1 \rightarrow y = -1 + \frac{-1}{-1} = 0$



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$[-2, 2]$

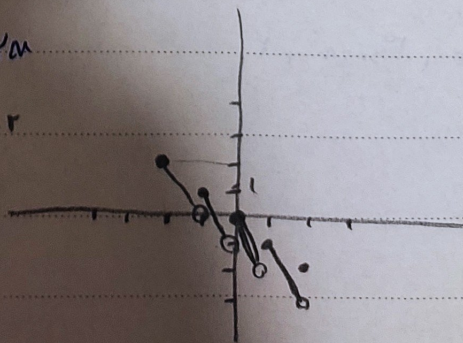
$[m] - 2m$

$m = 2 \rightarrow y = 2 - 2 \cdot 2 = -2$
 $-2 \leq m < -1 \rightarrow -2m - 2$

$-1 \leq m < 1 \rightarrow -2m$

$0 \leq m < 1 \rightarrow -2m$

$-1 \leq m < 0 \rightarrow -2m - 1$



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$$b) [a] | \cos |$$

$$a = 2 \rightarrow y = 2$$

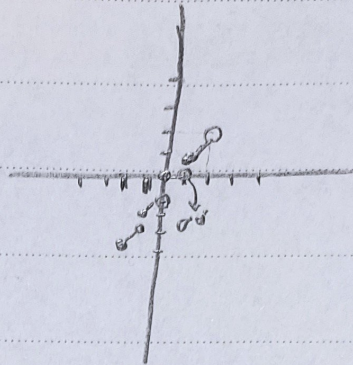
$$a = -2 \rightarrow y = -2$$

$$1 \leq a \leq 2 \rightarrow |a|$$

$$0 \leq a < 1 \rightarrow 0$$

$$-1 \leq a < 0 \rightarrow -|a|$$

$$-2 \leq a < -1 \rightarrow -2|a|$$



$$الف) y = \cos - [\cos]$$

$$R_y = [0, 1]$$

$$ع) a - \omega \left[\frac{a}{\omega} \right]$$

$$\omega \left(\frac{a}{\omega} - \left[\frac{a}{\omega} \right] \right) \rightarrow R_y = [0, \omega]$$

$$[0, 1]$$

$$\rightarrow y = \cos - [\cos]$$

$$f(\cos - [\cos])$$

$$[\cos]$$

$$\rightarrow R_y = [0, 1]$$

$$\Rightarrow y = [\cos] - \cos$$

$$= -(\cos - [\cos]) \rightarrow R_y = [-1, 0]$$

$$[0, 1]$$

$$-\sqrt{4+9} \leq -\sqrt{13}$$

$$الف) y = 3 \sin \alpha + 2 \cos \alpha$$

$$-\sqrt{13} \leq$$

$$\leq \sqrt{13}$$

$$R_y = [-\sqrt{13}, \sqrt{13}]$$

$$-\sqrt{a} \leq r \sin \alpha + a \cos \alpha \leq \sqrt{a}$$

$$ع) y = [r \sin \alpha + a \cos \alpha]$$

$$-4 \leq [r \sin \alpha + a \cos \alpha] \leq 4$$

$$R_y = \{-4, -2, -1, \dots, 1, 2, 4\}$$

$$-\sqrt{4+9} \leq$$

$$\leq \sqrt{4+9}$$

$$\Rightarrow y = 3 \sin \alpha - 2 \cos \alpha$$

$$R_y = [-5, 5]$$

$$-\sqrt{a} \leq c \cos \alpha - r \sin \alpha \leq \sqrt{a}$$

$$\Rightarrow y = \sqrt{c \cos \alpha - r \sin \alpha}$$

$$0 \leq \sqrt{c \cos \alpha - r \sin \alpha} \leq \sqrt{a}$$

$$\hookrightarrow R_y = [0, \sqrt{a}]$$

$$الف) y = \sin^2 \alpha + 3 \sin \alpha + 2$$

$$\frac{-b}{2a} = \frac{-3}{2} \rightarrow y = -\frac{1}{2}$$

$$a = -1 \rightarrow y = 0 \quad a = 1 \rightarrow y = 4$$

$$R_y = [0, 4]$$

$$\Rightarrow y = 3 \sin^2 \alpha + 3 \sin \alpha + 2$$

$$\frac{-b}{2a} = \frac{-3}{2} \rightarrow y = \frac{5}{2}$$

$$a = -2 \rightarrow y = 1$$

$$a = 1 \rightarrow y = 5$$

$$R_y = \left[\frac{5}{2}, 5 \right]$$

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Subject:

$$y = \sin^2 \alpha + r \cos^2 \alpha$$

$$y = \frac{r \cot^2 \alpha}{1 + \cot^2 \alpha}$$

$$\frac{\sin^2 \alpha + \cos^2 \alpha}{1} + \frac{r \cos^2 \alpha}{\cos^2 \alpha} \rightarrow R_{y_1} = [1, r]$$

$$\frac{\frac{r \cos^2 \alpha}{\sin^2 \alpha}}{\frac{1}{\sin^2 \alpha}} = \frac{r \cos^2 \alpha \sin^2 \alpha}{\sin^2 \alpha} = r \cos^2 \alpha$$

$$0 \leq \cos^2 \alpha \leq 1$$

$$R_{y_2} = [-1, 1]$$

$$y = \sin^4 \alpha + \cos^4 \alpha \quad R_{y_1} = \left[\frac{1}{2}, 1 \right]$$

$$y = [\sin^4 \alpha + \cos^4 \alpha]$$

$$\frac{1}{2} \leq \sin^4 \alpha + \cos^4 \alpha \leq 1$$

$$\frac{1}{2} \leq \sin^4 \alpha + \cos^4 \alpha \leq 1$$

$$\frac{1}{2} \leq \sin^4 \alpha + \cos^4 \alpha \leq 1$$

$$\frac{1}{2} \leq \sin^4 \alpha + \cos^4 \alpha \leq 1$$

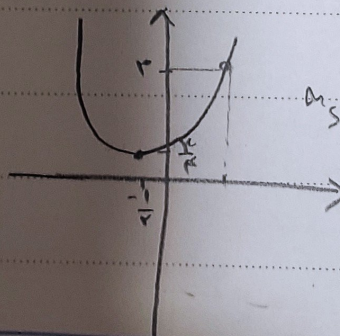
$$R_{y_2} = \{0, 1\} \text{ = مجموع دو حالت = 1}$$

$$y = \frac{r a^2 + b a - c}{a + b} \quad R_{y_1} = R - \{-a\}$$

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

$$\frac{(a+b)(ra-1)}{(a+b)} = ra-1$$

$$a \neq -1 \rightarrow y \neq -a$$



$$R_{y_2} = \left[\frac{1}{r}, r \right] \text{ and } \infty$$

$$a_5 = \frac{1}{r} \rightarrow y_{\min} = \frac{1}{r}$$