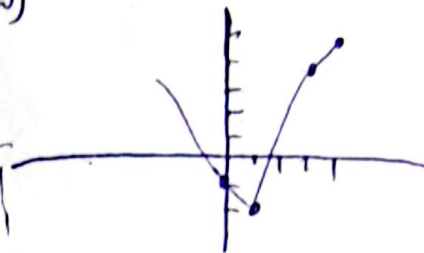
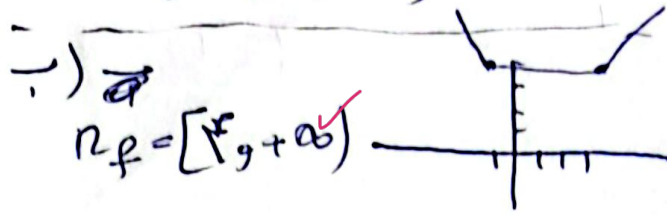


الف) $(1, -2), (2, 2), (0, -1), (4, 0)$

$\Rightarrow R_f = [-2, +\infty)$



(2)

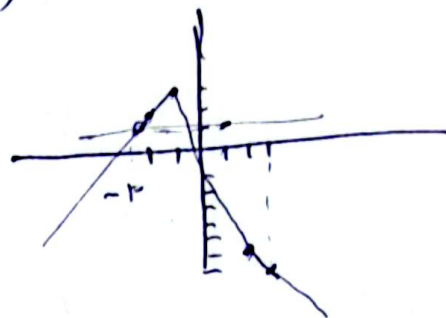
6

$(2, -4), (-1, 2), (-2, 2), (3, -5)$

$-m + 2 + 2m + 2 = m + 4 = 1 \Rightarrow m = -3$

$-m + 2 - 2m - 2 = -3m = 1 \Rightarrow m = -\frac{1}{3}$

$\Rightarrow (-\infty, -3] \cup [-\frac{1}{3}, +\infty)$

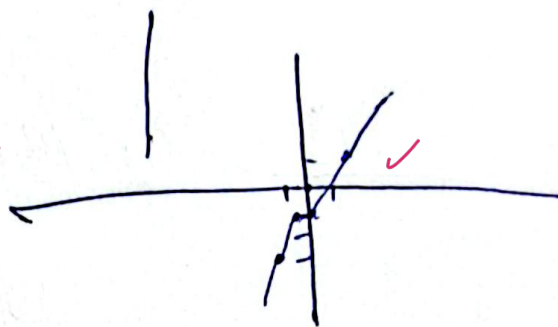


(2)

7

$(-1, -2), (-\frac{1}{2}, -1), (0, -1), (1, 1)$

$R_f = \mathbb{R} \text{ } (-\infty, +\infty)$

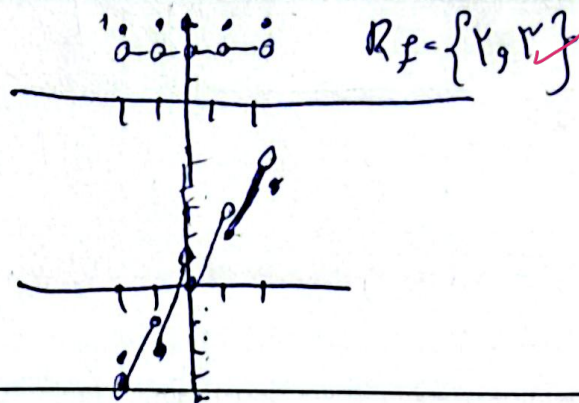


(2)

8

الف) $y = \underbrace{[m] + [-m]}_{-1, 0} + 3 \sim$

ب) $R_f = [-2, \infty)$



(2)

9

الف) $\begin{matrix} \rightarrow 1 \\ \leftarrow -1 \end{matrix} \sim R_f = [\frac{3}{2}, 3]$

ب) $\begin{matrix} \rightarrow 1 \\ \leftarrow 0 \end{matrix} \sim R_f = [1, 3]$

(2)

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