$$\begin{cases} x_1 - 3x_2 \le 0 \\ -x_1 + x_2 \le 2 \\ 4x_1 + 9x_2 \le 36 \\ 2x_1 + x_2 \ge 0 \end{cases} \Rightarrow$$

1) [illegible] x_2

2) [illegible]

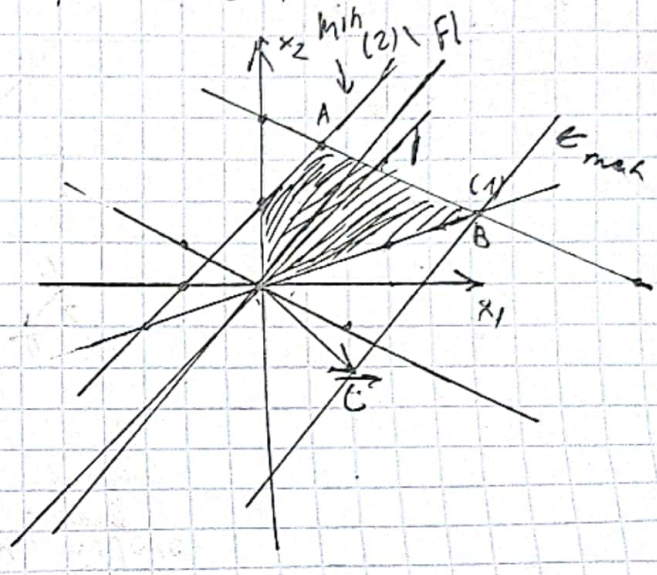
1) $x_2 \ge \frac{1}{3} x_1$

2) $x_2 \le 2 + x_1$

3) $x_2 \le -\frac{4}{9} x_1 + 4$

4) $x_2 \le -2x_1$

$x \ge 0 \quad x_2 \ge 0$



$-3x_2 \le x_1$

$x_2 \ge \frac{1}{3} x_1$

$9x_2 \le 36 - 4x_1$

$x_2 \le -\frac{4}{9} x_1 + 4$

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$0 = \frac{4}{9} x + 4$

$-4 = \frac{4}{9} x$ $\quad \frac{4 \cdot 9}{4}$

$4 = \frac{4}{9} x$

$x = 9$

$F = 2x_1 - 2x_2 \rightarrow$ extr

$\frac{1}{3} x = -\frac{4}{9} x + 4$

$\frac{4}{9} x = 4$ $\quad \frac{4 \cdot 9}{4}$

$x_1 = 9$

F_{min}

$x_2 = \frac{12}{4}$

$F_{max} = \frac{42 - 24}{4} = \frac{48}{4} = 6\frac{6}{4}$

$F_{min} = 2 - 6 = -4$ ↑ max