

## Lista 3 Gráficos

a) Resolla gráficamente os seguintes problemas

a). max  $2x_1 + x_2$

Dixito a

$-x_1 + x_2 \leq 1$

Valor Máximo 8

$x_1 \leq 3$

Coordenadas  $(3, 2)$

$x_2 \leq 2$

$x_1, x_2 \geq 0$

b) max  $2x_1 + x_2$  Valor Máximo 4

Dixito a

coordenadas  $(0, 2)$  e  $(0, 5, 3)$

$-2x_1 + x_2 \leq 2$

$2x_1 + x_2 \leq 4$

$x_1, x_2 \geq 0$

c) max  $x_2$

Valor Máximo 2

Dixito a

Conjunto de m. poligonal dividido

$-x_1 + x_2 \leq 1$

Punto de  $x_1$

$x_2 \geq 2$

$x_1, x_2 \geq 0$

d) max  $2x_1 + x_3$

Dixito a

$x \leq 1$

Valor Máximo Nenhum

$x_2 \geq 4$

Conjunto de m. poligonal, mas o mesmo perp. infinito positivo

$x_1 - x_2 \geq 4$

$x_1, x_2 \geq 0$

$$g) \text{ min } 2x_1 + x_2$$

Restrições:

$$x_1 \leq 3$$

$$x_2 \leq 2$$

$$x_1 - x_2 \geq 1$$

$$x_1, x_2 \geq 0$$

Valor Mínimo: 1  
Combinação: (2, 1)

(B) Bb Dd

$$g) \text{ max } x_1$$

Restrições:

$$-x_1 + x_2 \leq 2$$

$$x_2 \leq 5$$

$$x_1, x_2 \geq 0$$

Valor Máximo: 0

Combinação: (0, 2)

$$g) \text{ min } x_1 + 2x_2$$

Restrições:

$$x_1 - x_2 \leq 0$$

$$-3x_1 + 2x_2 \leq 6$$

$$x_1, x_2 \geq 0$$

Valor Mínimo: 4

Combinação: (0, 2)

$$g) \text{ max } 2x_1 + x_2$$

Restrições:

$$-x_1 + x_2 \leq 1$$

$$x_1 \leq 2$$

$$x_1, x_2 \geq 0$$

$$x_2 = 1 - 0$$

$$x_1 = 1$$

$$x_1 + x_2 = 1$$

$$x_1 = 1 - x_2$$

$$-x_1 = 1 - 0$$

$$x_1 = 1 - 0$$

$$(x_1 = 1)$$

$$g) \text{ max } x_1 + x_2$$

$$x_2 = 1 - x_1$$

$$x_1 | x_2$$

$$\begin{array}{|c|c|} \hline & 1 \\ \hline 1 & 0 \\ \hline \end{array}$$

18.07.22

$$\text{II} \quad x_1 = 3$$

$$\begin{array}{|c|c|} \hline x_1 & x_2 \\ \hline \end{array}$$

$$\begin{array}{|c|c|} \hline 3 & 0 \\ \hline \end{array}$$

$$\text{III} \quad x_2 = 2$$

$$\begin{array}{|c|c|} \hline x_1 & x_2 \\ \hline 0 & 2 \\ \hline \end{array}$$

Betas no fluxo contínuo

↳ Abraçadeira lisa  
Larim da lata

$$\text{Peso } 2x_1 + x_2$$

$$\text{C } \begin{array}{|c|c|c|} \hline 3 & 0 & 6+0=6 \\ \hline \end{array}$$

$$\text{E } \begin{array}{|c|c|c|} \hline 3 & 3 & 6+3=9 \\ \hline \end{array}$$

$$\text{F } \begin{array}{|c|c|c|} \hline 1 & 2 & 2+2=4 \\ \hline \end{array}$$

$$\text{A } \begin{array}{|c|c|c|} \hline 0 & 1 & 0+1=1 \\ \hline \end{array}$$

$$-x_1 + x_2 = 1 \quad \text{Ajustar cordas de pôlo zulu}$$

$$-x_1 + 2 = 1 \quad \text{produzir saídas} \quad -3+x_1 = 1$$

$$-x_1 = 1-2$$

$$-x_1 + 2 = 1$$

$$x_1 = 1-3$$

$$-x_1 = -1 \quad (-1)$$

$$-x_1 = 1-2$$

$$x_2 = -2 \quad (-1)$$

$$\boxed{x_1 = 1}$$

$$-x_1 = -1 \quad \text{e} \quad \boxed{x_1 = 1}$$

$$\boxed{x_2 = 2}$$

$$\textcircled{B} \quad \text{Mod } 2x_1 + x_2$$

$$-2x_1 + x_2 \leq 2 \quad (\text{I})$$

$$2x_1 + x_2 \leq 4 \quad (\text{II})$$

$$x_1, x_2 \geq 0$$

$$\text{I) } -2x_1 + x_2 = 2$$

$$x_2 = 2 + 2x_1$$

$$x_2 = 2 + 2 \cdot 0$$

$$x_2 = 2 + 0$$

$$\boxed{x_2 = 2}$$

$$\begin{array}{|c|c|} \hline x_1 & x_2 \\ \hline \end{array}$$

$$\begin{array}{|c|c|} \hline 0 & 2 \\ \hline \end{array}$$

$$\begin{array}{|c|c|} \hline -2 & 0 \\ \hline \end{array}$$

$$-2x_1 + x_2 = 2$$

$$-2x_1 + 0 = 2$$

$$-2x_1 = 2 - 0$$

$$\boxed{-2x_1 = 2}$$

$$x_1 = 2 / -2$$

$$\boxed{x_1 = -1}$$

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$$\text{III) } 2x_1 + x_2 = 4$$

$$2 \cdot 0 + x_2 = 4$$

$$0 + x_2 = 4$$

$$x_2 = 4 - 0$$

$$\boxed{x_2 = 4}$$

$$2x_1 + 0 = 4$$

$$2x_1 = 4 - 0$$

$$2x_1 = 4$$

$$x_1 = 4$$

$x_1$	$x_2$
0	4
2	0

$$-2x_1 + x_2 = 2$$

$$2x_1 + x_2 = 4$$

$$2x_2 = 6$$

$$\boxed{x_2 = 6}$$

$$2x_1 + x_2 = 4$$

$$2x_1 + 3 = 4$$

$$\boxed{x_2 = 3}$$

$$2x_1 = 4 - 3$$

$$2x_1 = 1$$

$$x_1 = 1/2 \rightarrow x_1 = 0,5$$

(c) Max  $x_2$

ausföhrl. d.

$$\text{I) } -x + x_2 \leq 1$$

$$\text{II) } x_2 \geq 2$$

$$x_1, x_2 \geq 0$$

$$\text{II) } x_2 = 2$$

$$\begin{array}{ccc|c} A & -1 & 0 & \text{bra} \\ B & 0 & 1 & \\ C & 0 & 2 & 2 \end{array}$$

	$x_1$	$x_2$	
I	0	1	
-	-1	0	
	0	2	2

$$\text{I) } -x + x_2 = 1$$

$$x_2 = 1 + x_1$$

$$x_2 = 1 + 0$$

$$\boxed{x_2 = 1}$$

$$-x + x_2 = 1$$

$$-x = 1 - x_2$$

$$-x = 1 - 0$$

$$-x = 1 (-1)$$

$$\boxed{x = -1}$$

19.06.2022

②  $110x_1 + x_2 \leq 200$

$x_1 \geq 0$

$x_2 \geq 0$

③  $x_1 = 1$

④  $x_2 = 4$

⑤  $x_1 - x_2 = 4$

$x_1 - x_2 = 4$

$0 - x_2 = 4$

$x_2 = 4 - 0$

$x_2 = 4$

$x_1 - x_2 = 4$

$x_1 - 0 = 4$

$x_1 = 4 + 0$

$x_1 = 4$

$2x_1 + x_2$

$2x_1 + 4$

$x_1 + 4$

$\frac{x_1 + 4}{2}$

$x_1 = 2$

1 abr 91

18 abr 92

Esta pagina provavelmente fa deusas embus

18.06.22

$$\textcircled{E} \max 2x_1 + x_2$$

Bereich A

$$\text{I)} x_1 \leq 3$$

$$\text{II)} x_2 \leq 2$$

$$\text{III)} x_1 - x_2 \geq 1$$

$$x_1, x_2 \geq 0$$

			$2x_1 + x_2$
A	0	1	$0+1=1$
B	0	3	$0+3=3$
C	1	0	$2+0=2$
D	2	0	$4+0=4$
E	2	3	$4+3=7$

$$\text{I)} x_1 = 3$$

$$\text{II)} x_2 = 2$$

$$\text{III)} x_1 - x_2 = 1$$

$$x_1 = 1 + x_2$$

$$x_1 = 1 + 0$$

$$x_1 = 1$$

$x_1$	$x_2$
0	1
1	0

$$x_1 - x_2 = 1$$

$$x_2 = 1 - x_1$$

$$x_2 = 1 - 0$$

$$\underline{x_2 = 1}$$

18.06.22

F) min  $x_1$

subject to

I)  $-x_1 + x_2 \leq 2$

II)  $x_2 \leq 5$

$x_1, x_2 \geq 0$

I)  $-x_1 + x_2 = 2$

$x_2 = 2 + x_1$

$x_2 = 2 + 0$

$\boxed{x_2 = 2}$

$x_1 \quad x_2$

0 | 2

-2 | 0

$-x_1 + x_2 = 2$

$-x_1 + 0 = 2$

$\rightarrow x_1 = 2 - 0$

$-x_1 = 2 \{ -1 \}$

$\boxed{x_1 = -2}$

II)  $x_2 = 5$

A (0, 5) 0  $-x_1 + x_2 = 2$

B (0, 2) 0  $-x_1 + 5 = 2$

C (3, 5) 3  $-x_1 = 2 - 5$

D (-2, 0) -2  $-x_1 = -3 \{ -1 \}$

$\boxed{x_1 = 3}$

18.06.2022

$$\textcircled{6} \quad \max x_1 + 2x_2$$

Bereitschaft

$$\begin{aligned} \text{i)} \quad & x_1 - x_2 \leq 0 \\ \text{ii)} \quad & -3x_1 + 3x_2 \leq 6 \\ & x_1, x_2 \geq 0 \end{aligned}$$

$$\text{i)} \quad x_1 - x_2 = 0$$

$$-x_2 = 0 - x_1$$

$$-x_2 = 0 - 0$$

$$-x_2 = 0$$

$$x_2 = 0$$

$$x_1 - x_2 = 0$$

$$x_1 = 0 + x_2$$

$$x_1 = 0 + 0$$

$$\underline{x_1 = 0}$$

$x_1$	$x_2$
0	6
0	0

$$\text{II)} \quad -3x_1 + 3x_2 = 6$$

$$3x_2 = 6 + 3x_1$$

$$3x_2 = 6 + 3 \cdot 0$$

$$3x_2 = 6 + 0$$

$$3x_2 = 6$$

$$x_2 = 2$$

$$\underline{3}$$

$$x_2 = 2$$

$x_1$	$x_2$
0	2
-3	0

$$x_1 + 2x_2$$

$$0 + 2 \cdot 0 = 0$$

$$\underline{B} \quad -2 \quad 0$$

$$\underline{\text{Bra}}$$

$$0 + 2 \cdot 2 = 4 \text{ Mauer}$$

$$-3x_1 + 3x_2 = 6$$

$$\underline{C} \quad 0 \quad 2$$

$$-3x_1 = 6 - 3x_2$$

$$\underline{\text{Bra}}$$

$$-3x_1 = 6 - 3 \cdot 0$$

$$-3x_1 = 6 - 0$$

$$-3x_1 = 6$$

$$x_1 = \underline{6}$$

$$\underline{-3}$$

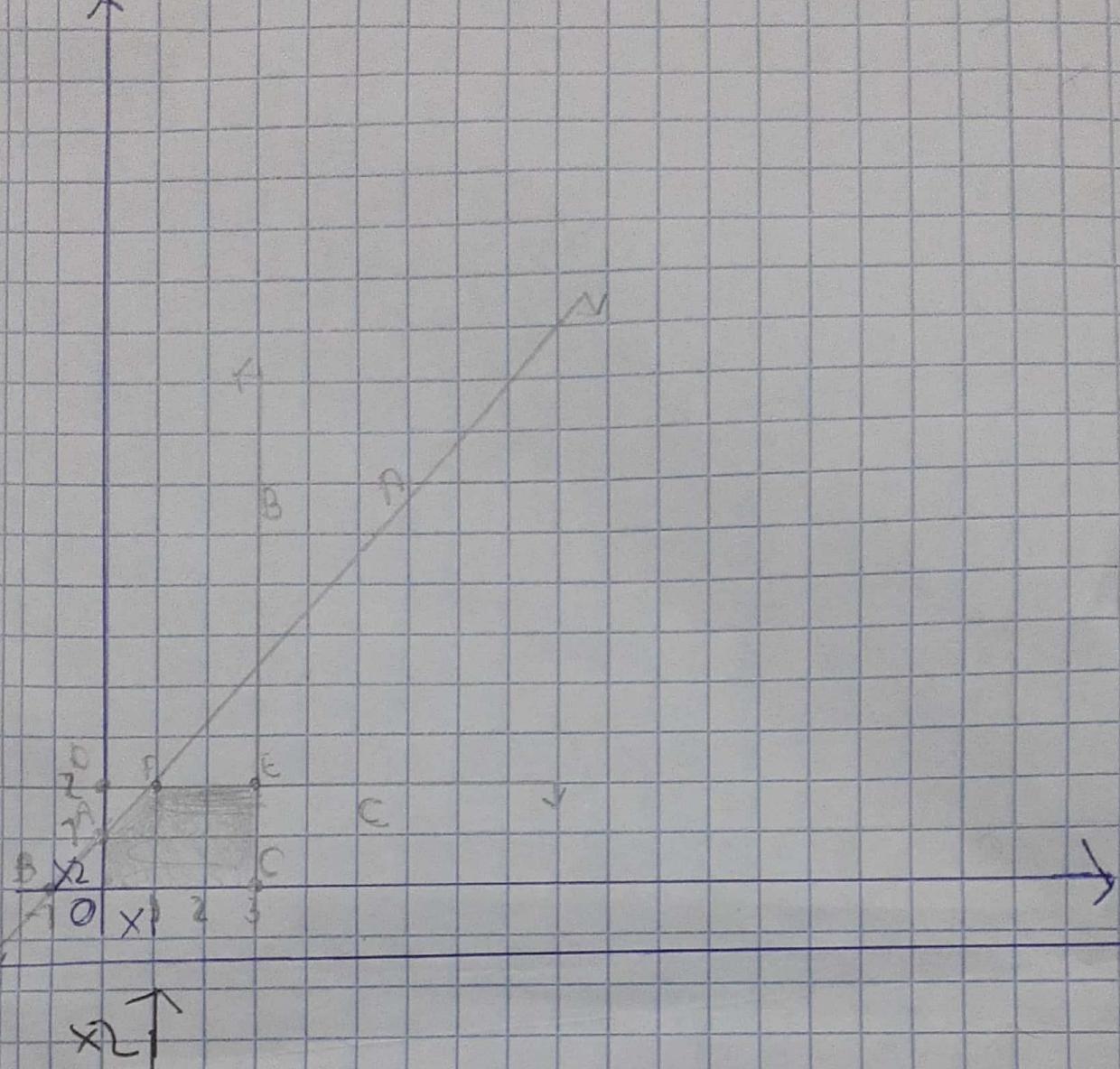
$$\underline{x_1 = -2}$$

18/06/22

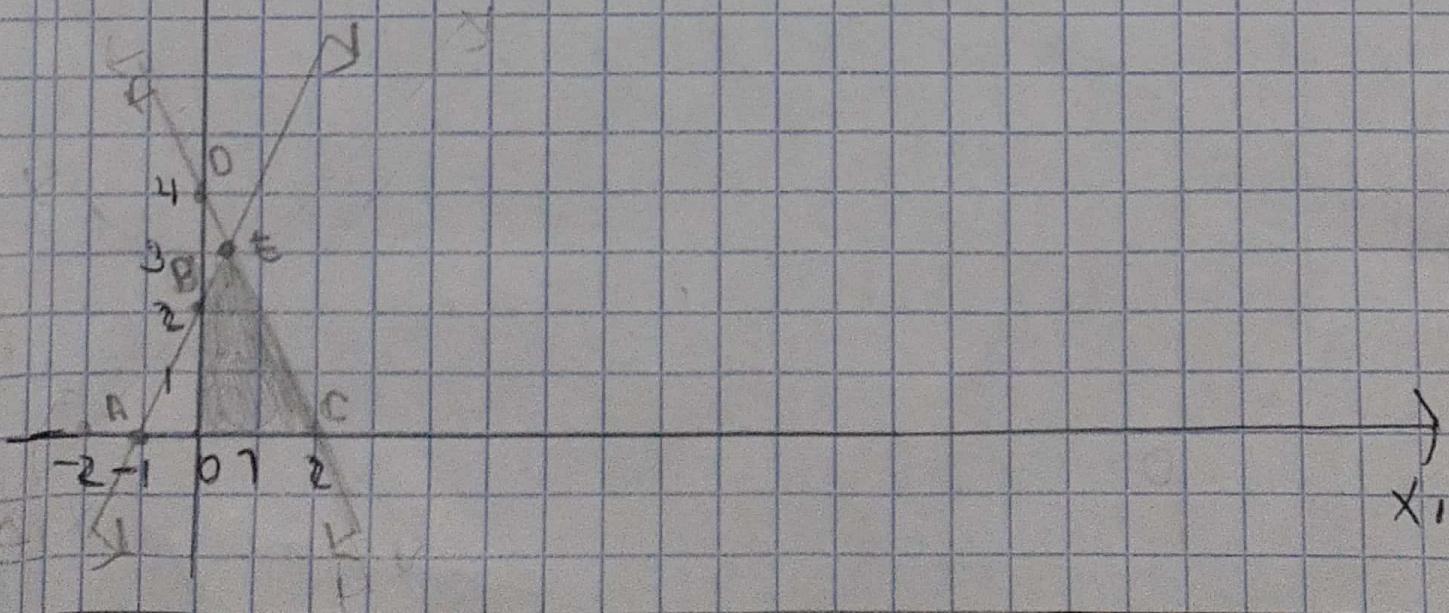
Observar, traçar e redigir gráficos que  
sejam usados em monografias, com folhas quadrículadas,  
para facilitar a sua interpretação sobre o corte.

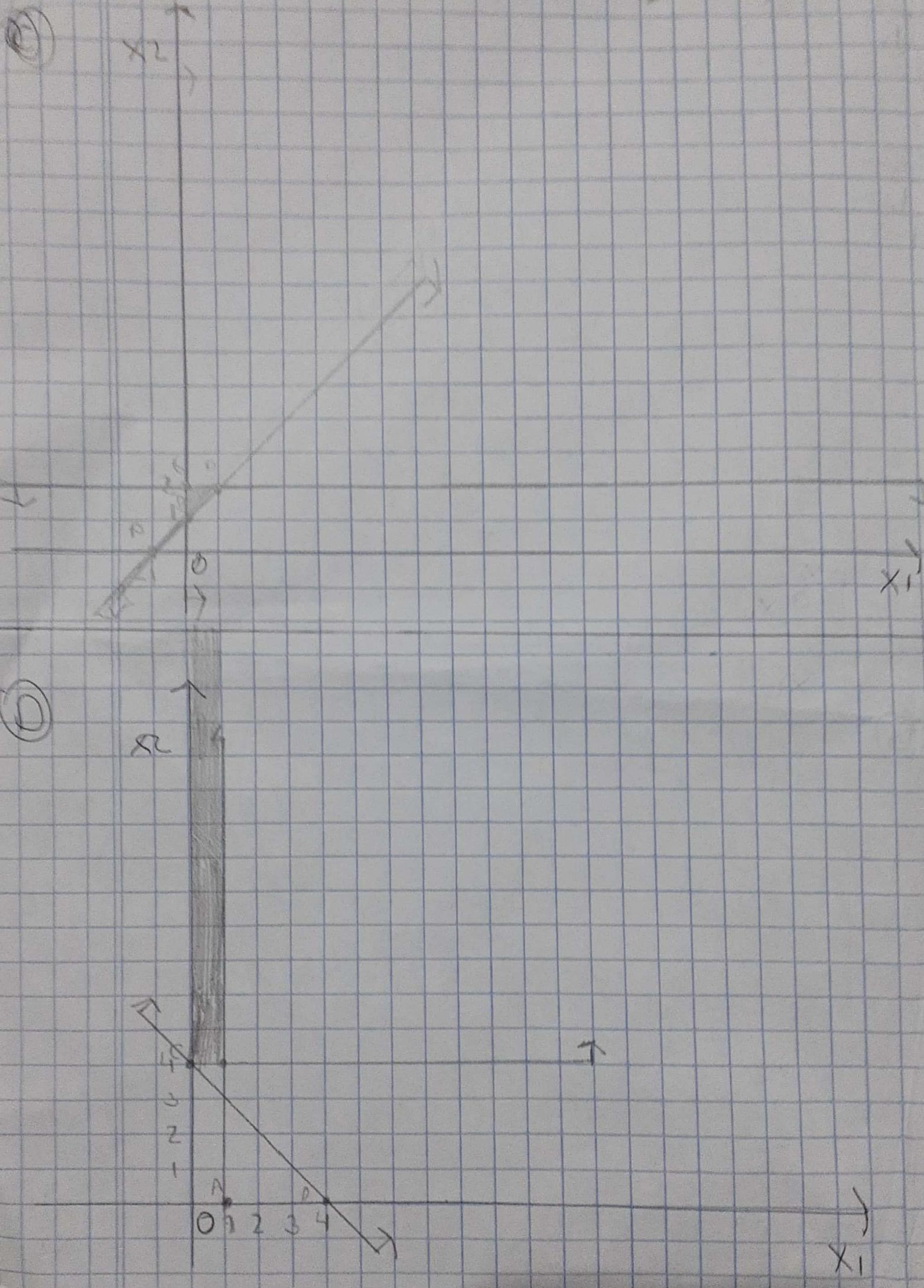
(A)

Exercice  
pour

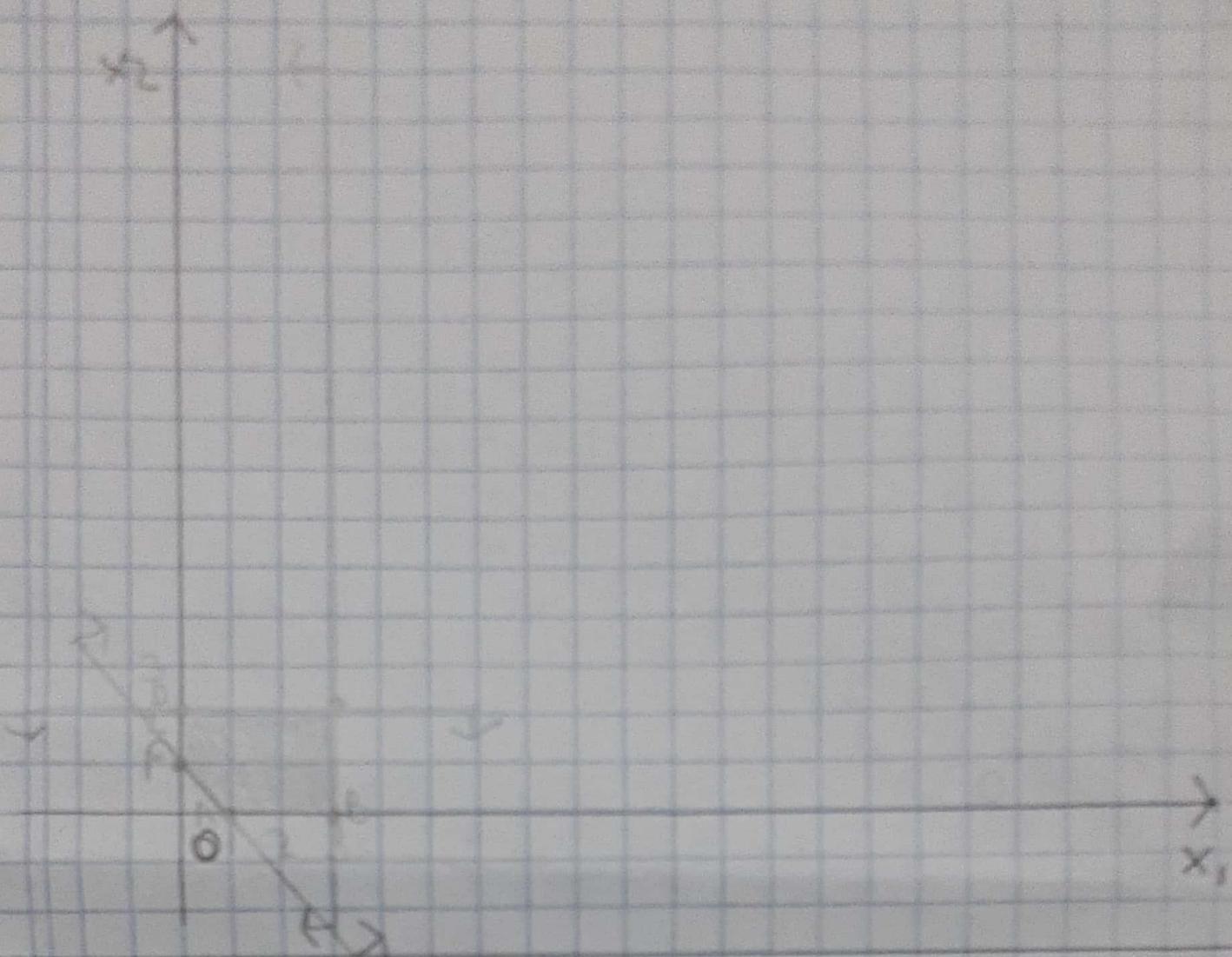


(B)





E



F

