

1.7

#A : x

#B : y



f objective :

Profit

$50x + 20y$

Contraintes

80 h

120 kg

A

1 · x h

3x kg

B

2y h

2y kg

$$x + 2y \leq 80$$

$$3x + 2y \leq 120$$

A' dessiner

Technique

Résoudre graphiquement
Equation

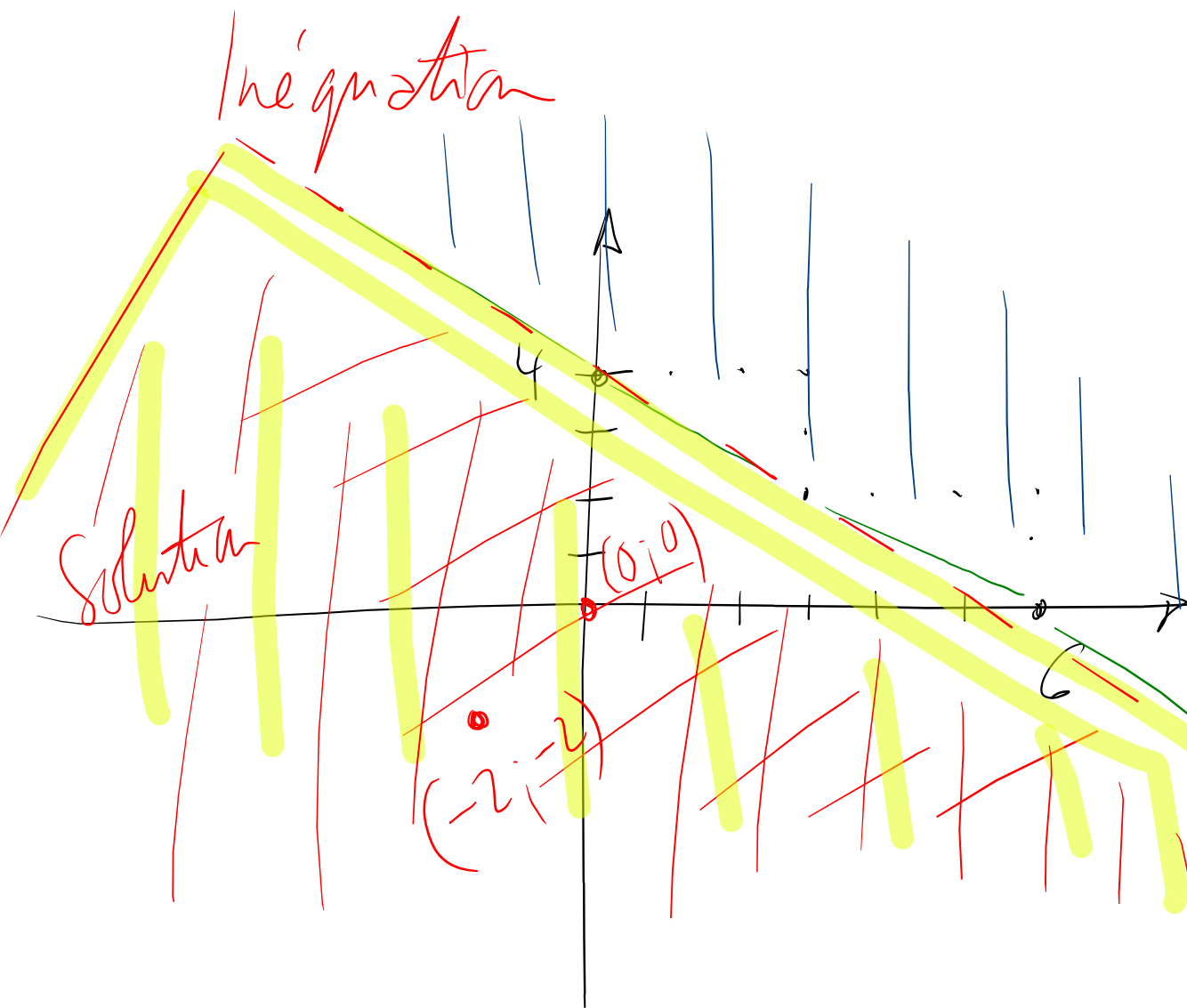
$$2x + 3y - 12 < 0$$

$$2x + 3y - 12 = 0 \quad 3y = -2x + 12$$

$$y = -\frac{2}{3}x + 4$$

droite

$$\frac{dv}{dh}$$



$$y = -\frac{2}{3}x + 4$$

$$2x + 3y - 12 < 0$$

$$(2; 5)$$

$$(-3; 8)$$

$$(6; 6)$$

$$(-2; -2)$$

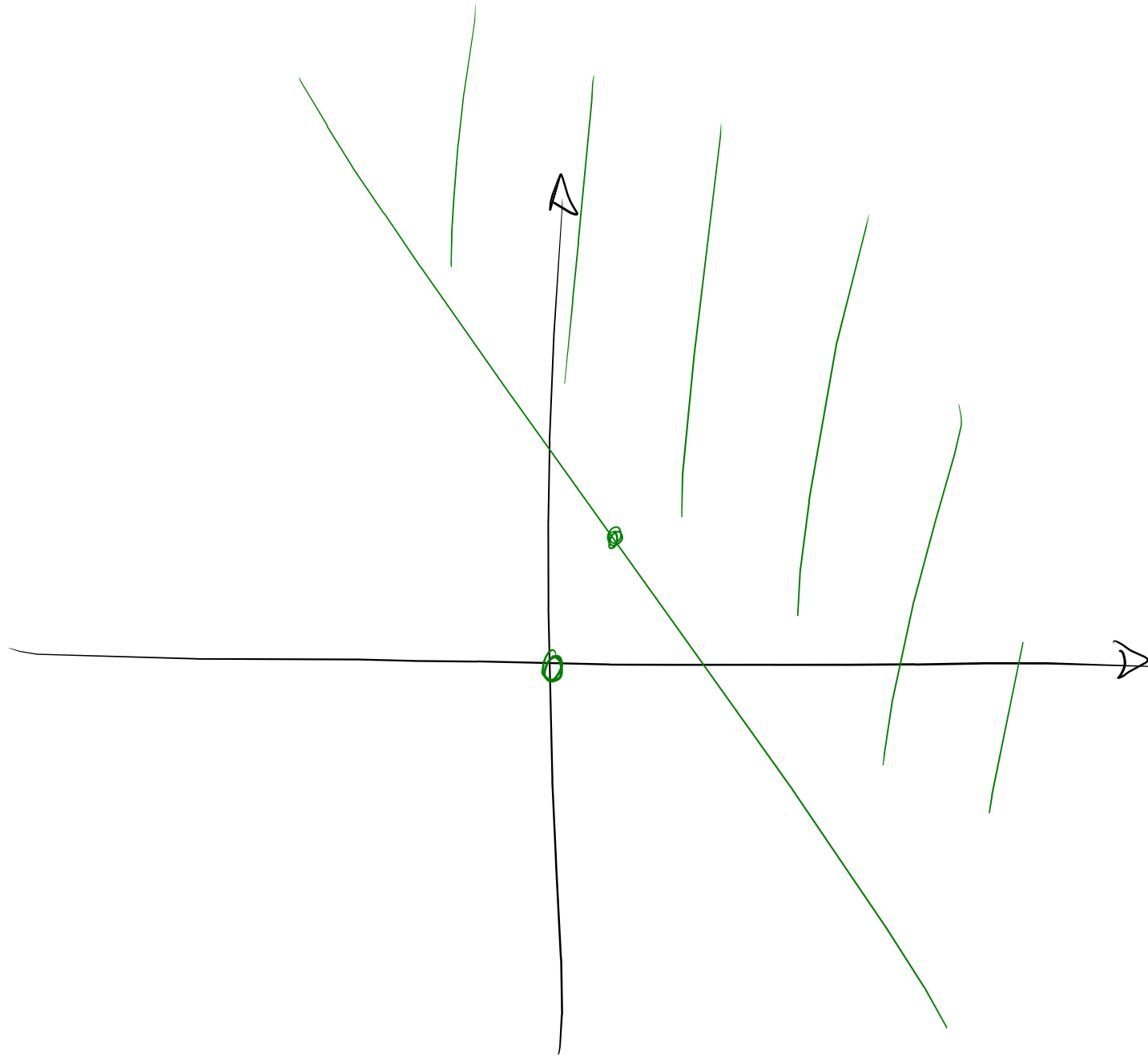
$$2x + 3y - 12 < 0$$

$$2 \cdot 2 + 3 \cdot 5 - 12 = 4 + 15 - 12 = 7$$

$$-6 + 24 - 12 = 6$$

$$12 + 18 - 12 = 18$$

$$-4 - 6 - 12 = -22$$



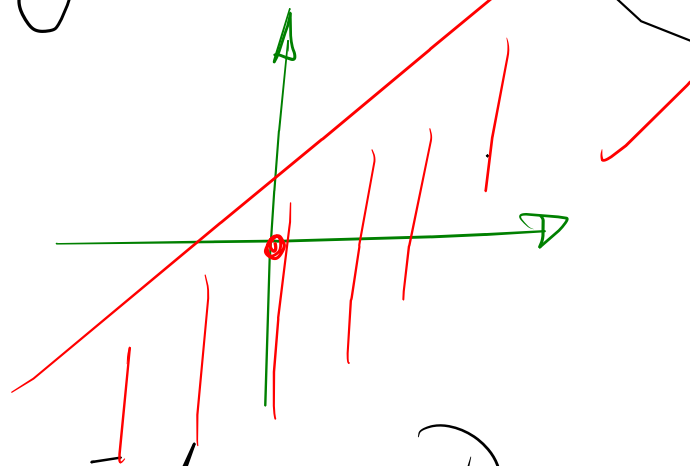
Résolution inég.

$$ax + by + c \geq 0$$

① Droite associée : $ax + by + c = 0$

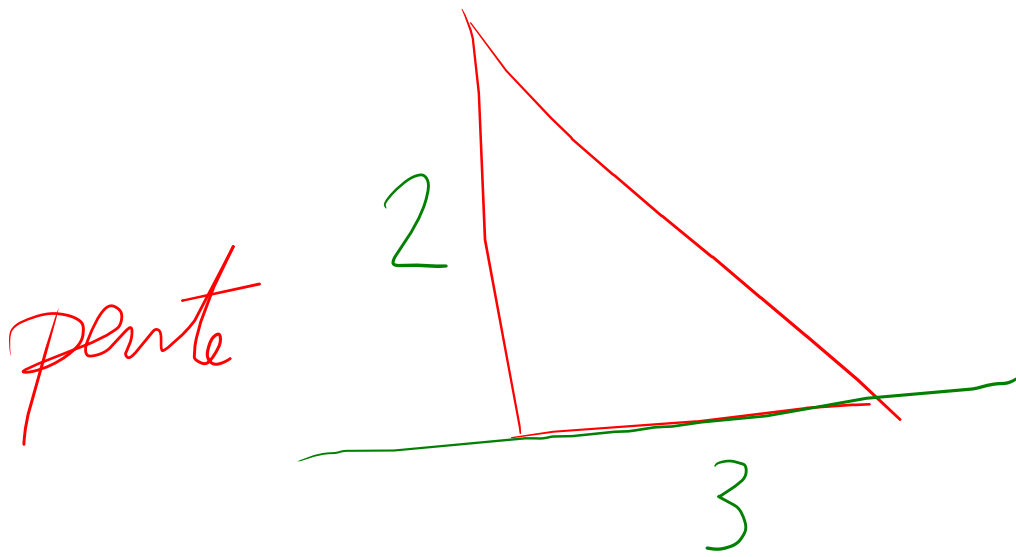
$\hookrightarrow y = mx + h$ f affine

② Dessiner la droite



③ Tester avec un point : Donne la bonne zone

$$y = -\frac{2}{3}x + 1$$



$$\frac{1}{2}x + 3y \geq 0 \quad \Leftrightarrow \quad x + 6y \geq 0$$

$$\Leftrightarrow \quad -x - 6y \leq 0$$