pour $x_1 = 0 \Rightarrow x_2 = \dfrac{c}{(x_1+1)} - 2 = c - 2 \geq 0$

car $c \geq 2$

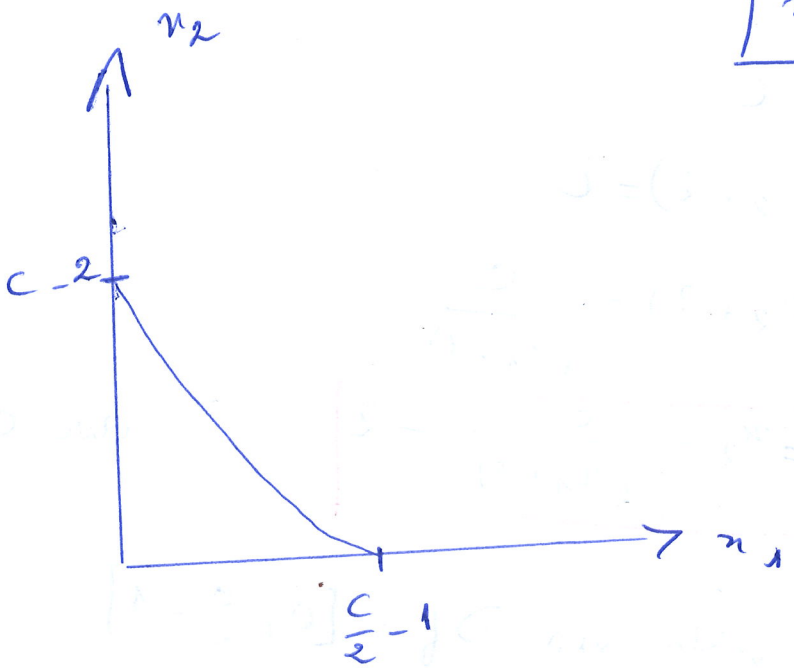
pour $f(x_1) = 0 \Rightarrow \dfrac{c}{x_1+1} - 2 = 0 \Rightarrow \dfrac{c}{x_1+1} = 2$

$c = 2(x_1+1)$

$c = 2x_1 + 2$

$2x_1 = c - 2$

$$\boxed{x_1 = \frac{c}{2} - 1}$$



② a- Programme du Consommateur

$$(P) \begin{cases} \text{Max } U(x_1, x_2) = (x_1+1)(x_2+2) \\ x_1 \geq 0 \quad ; \quad x_2 \geq 0 \\ x_1 + x_2 \leq R \end{cases}$$