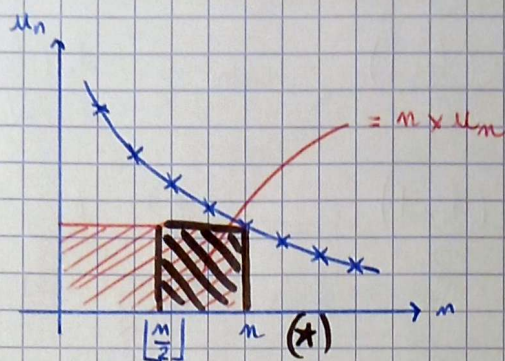


Exercice 74 (Nicolas)



On a : $0 \leq m u_m \leq \sum u_n$

$$(\star) \quad \left(m - \left\lfloor \frac{m}{2} \right\rfloor\right) u_m \leq \sum_{k=\left\lfloor \frac{m}{2} \right\rfloor}^m u_k = A_m$$

$\left\{ \begin{array}{l} \forall k \in \left[\left\lfloor \frac{m}{2} \right\rfloor, m\right], u_k \geq u_m \\ A_m \text{ est une somme de } \left(\left\lfloor \frac{m}{2} \right\rfloor + m + 1\right) \text{ termes} \\ \geq u_m \end{array} \right.$

$$A_m \geq \frac{m}{2} u_m \geq 0$$

$$\begin{array}{c} \parallel \\ S_m - S_{\left\lfloor \frac{m}{2} \right\rfloor} \xrightarrow{n \rightarrow \infty} S - S = 0 \end{array}$$