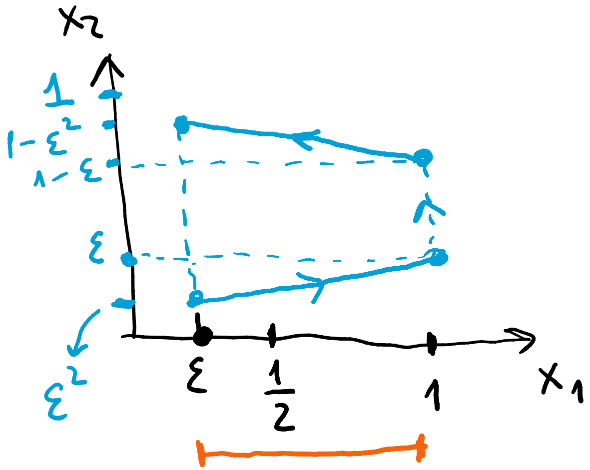
6. april 2020 08:55

$0 < \varepsilon < \frac{1}{2}$; $\varepsilon \le x_1 \le 1$, $\varepsilon x_1 \le x_2 \le 1 - \varepsilon x_1$

$\varepsilon x_j \le x_{j+1} \le 1 - \varepsilon x_j$; $f(x_1, \dots, x_m) = -x_m$



$\boxed{m=2}$

$\varepsilon x_1 \le x_2$

$x_2 \le 1 - \varepsilon x_1$

$$\begin{array}{ccc} \varepsilon & < & 1 \\ \downarrow & & \downarrow \\ a_1 & & a_2 \end{array}$$

εa_1 , εa_2 ,

$1 - \varepsilon a_1$, $1 - \varepsilon a_2$

$\boxed{m=3}$

$$\begin{array}{ccccccc} \varepsilon^2 & < & \varepsilon & < & 1-\varepsilon & < & 1-\varepsilon^2 \\ \downarrow & & \downarrow & & \downarrow & & \downarrow \\ a_1 & < & a_2 & < & a_3 & < & a_4 \end{array}$$

I. $0 \leq a_1 \leq 1$

II. $\boxed{\varepsilon a_k < 1 - \varepsilon a_j}$, $\forall j,k \in \{1, 2\}$

$\Updownarrow$

$\varepsilon (a_k + a_j) < 1$ ✓ (fordi $a_k + a_j \leq 2$ og $\varepsilon < \frac{1}{2}$

en vilkårlig linje εx_2 vil ligge under en vilkårlig linje $1 - \varepsilon x_2$

$\boxed{\text{Alle mulige hjørne vil have en kordinat } x_3 \text{ givet enten af } \varepsilon a_k \text{ eller } 1 - \varepsilon a_j}$

III. $\varepsilon a_k < \varepsilon a_{k+1}$

$1 - \varepsilon a_{j+1} < 1 - \varepsilon a_j$

$\varepsilon a_1 < \varepsilon a_2 < \varepsilon a_3 < \varepsilon a_4 < 1 - \varepsilon a_4 < 1 - \varepsilon a_3 < 1 - \varepsilon a_2 <$

$1 - \varepsilon a_1$

2^3 hjørner.