

$$L^p(\mathcal{A})(x) := \left\{ \begin{array}{l} a_0 a_1 \dots \\ \in \Sigma^\omega \end{array} \middle| \begin{array}{l} x = x_0 \xrightarrow{a_0} x_1 \xrightarrow{a_1} \dots \\ \text{s.t. } \limsup_{k \rightarrow \infty} p(x_k) \text{ is even} \end{array} \right\}$$