

# Grundy

eo eo

- 2
- 
- 
- 

Nim

$$(\quad): X \ni f \mapsto f: X \rightarrow 2^X \qquad \mathcal{A} = (X, f) \qquad X \in \mathcal{A} \qquad f \in \mathcal{A}$$

$$: 2^X \rightarrow X$$

$$(\quad): \mathcal{A} = (X, f) \qquad n \qquad x_0, \dots, x_n \in X \quad x_{i+1} \in f(x_i) \quad (i = 0, \dots, n-1) \qquad (x_0, \dots, x_n) \\ \mathcal{A} \quad n \qquad x_0$$

$$(\quad): \mathcal{A} = (X, f) \qquad \mathcal{A} \\ \bullet \quad n_0 \in \mathbb{N} \qquad \mathcal{A} \quad n_0$$

$$(\quad): \mathcal{A} = (X, f) \\ \mathcal{E} := \{x \in X \mid f(x) = \emptyset\} \\ \mathcal{E} \qquad \mathcal{A} \qquad \mathcal{E} \neq \emptyset$$

( ) :  $\mathcal{A} = (X, f)$       $\mathcal{E}$       $\mathcal{G}$   $\mathcal{S}$

- $\mathcal{E} \subset \mathcal{G}$
- 

( Nim):  $n$

## Grundy