

Recursive Maps

SET_THEORY_04_1955917673267200

Definition 0.1. Let A be a class.

$$A^{<\infty} = \{f \mid f \text{ is a map from } \alpha \text{ to } A \text{ for some ordinal } \alpha\}.$$

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Proposition 0.2. Let A be a class and f be a map to A such that $\text{dom}(f)$ is a transitive subclass of **Ord** and $\alpha \in \text{dom}(f)$. Then $f \upharpoonright \alpha \in A^{<\infty}$.

[prover vampire]

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Definition 0.3. Let H be a map and $G : A^{<\infty} \rightarrow A$ for some class A such that H is a map to A . H is recursive regarding G iff $\text{dom}(H)$ is a transitive subclass of **Ord** and for all $\alpha \in \text{dom}(H)$ we have

$$H(\alpha) = G(H \upharpoonright \alpha).$$

[prover eprover]