

Definition (Upper closure operator)

The *upper closure operator* \uparrow maps a subset to the smallest upper set that includes it:

$$\uparrow : \mathcal{P} \mathbf{P} \rightarrow \mathcal{U} \mathbf{P},$$

$$S \mapsto \{y \in \mathbf{P} \mid \exists x \in S : x \leq_{\mathbf{P}} y\}.$$