

Definition (Lower set). A *lower set* \mathbf{L} is a subset of a poset \mathbf{P} such that, if $x \in \mathbf{L}$, then all elements of \mathbf{P} that are below x are also in \mathbf{L} . In other words:

$$\frac{x \in \mathbf{L} \quad y \leq_{\mathbf{P}} x}{y \in \mathbf{L}}$$