

Definition (Poset of intervals). An interval is an ordered pair of elements $\langle l, u \rangle$ of \mathbf{P} , such that $l \leq_{\mathbf{P}} u$. Given a poset \mathbf{P} , one can define a *poset of intervals* on \mathbf{P} . Intervals can be ordered by inclusion:

$$\langle l_1, u_1 \rangle \leq_{\text{Int}P} \langle l_2, u_2 \rangle \Leftrightarrow (l_1 \leq_{\mathbf{P}} l_2) \wedge (u_2 \leq_{\mathbf{P}} u_1).$$

rewrite above with the right letters