Lemma. $\mathcal{U}\mathbf{P}$ is a bounded lattice (**??**) with

$$\preceq_{\mathcal{U}\mathbf{P}} := \supseteq$$

$$\bot_{\mathcal{U}\mathbf{P}} := \mathbf{P}$$

$$\top_{\mathcal{U}\mathbf{P}} := \emptyset$$

$$\vee_{\mathcal{U}\mathbf{P}} := \cap$$

$$\wedge_{\mathcal{U}\mathbf{P}} := \cup.$$