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

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

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

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

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

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