

Definition. The *opposite* of a poset $\langle \mathbf{P}, \leq_{\mathbf{P}} \rangle$ is the poset denoted as $\langle \mathbf{P}^{\text{op}}, \leq_{\mathbf{P}^{\text{op}}} \rangle$ that has the same elements as \mathbf{P} and the reverse ordering (??). For a given $p \in \mathbf{P}$, we use p^* to represent its corresponding copy in \mathbf{P}^{op} ; note that p and p^* belong to distinct posets. Reversing the order means that, for all $p, q \in \mathbf{P}$,

$$p \leq_{\mathbf{P}} q \quad \Leftrightarrow \quad q^* \leq_{\mathbf{P}^{\text{op}}} p^*.$$