Definition. The *opposite* of a poset $\langle \mathbf{P}, \leq_{\mathbf{P}} \rangle$ is the poset denoted as $\langle \mathbf{P}^{\mathrm{op}}, \leq_{\mathbf{P}}{}^{\mathrm{op}} \rangle$ 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 $\mathbf{P}^{\mathrm{op}}$; note that p and p^* belong to distinct posets. Reversing the order means that, for all $p, q \in \mathbf{P}$,

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