Given two bounded lattices **P**, **Q**, a bounded lattice homomorphism is a lattice

Definition (Bounded lattice homomorphism)

homomorphism
$$f: \mathbf{P} \to \mathbf{Q}$$
 which also preserves top and bottom:

 $f(\mathsf{T}_{\mathbf{P}}) = \mathsf{T}_{\mathbf{O}}$



$$f(\perp_{\mathbf{P}}) = \perp_{\mathbf{O}}$$