4.6.2 Quasidifference

Conjecture 4.262. $a\setminus^* b = \bigsqcup \{a \sqcap \uparrow(U \setminus B) \mid B \in b\}$ for all $a, b \in \mathfrak{F}$ for each lattice $\mathfrak{F}$ of filters on a set U.

4.6.3 Non-Formal Problems

Find a common generalization of two theorems:

1. If $\mathfrak{Z}$ is a meet-semilattice with greatest element then for any $\mathcal{A}, \mathcal{B} \in \mathfrak{F}$
$$\mathcal{A} \sqcup^{\mathfrak{F}} \mathcal{B} = \mathcal{A} \cap \mathcal{B}.$$
2. If $\mathfrak{Z}$ is a join-semilattice then $\mathfrak{F}$ is a join-semilattice then and for any $\mathcal{A}, \mathcal{B} \in \mathfrak{F}$
$$\mathcal{A} \sqcup^{\mathfrak{F}} \mathcal{B} = \mathcal{A} \cap \mathcal{B}.$$

Under which conditions $a\setminus^* b$ and $a\#b$ are complementive to a?

Generalize straight maps for arbitrary posets.