

For $A, B \in S$, we have $A \cap B \in S$. Thus, $\inf\{A, B\}$ is given simply by $A \cap B$. For $\sup\{A, B\}$, we take $\sqrt{A+B} \in S$, where the “radical” of an ideal. A semiprime ideal C contains both A and B iff $C \supseteq A+B$, iff $C \supseteq \sqrt{A+B}$. Thus, $\sqrt{A+B}$ is indeed the supremum of A and B in S . This shows that S is a lattice. Clearly, S has a largest element, R , and a smallest element, Nil^*R .