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Title: A note on lattices of idempotents in algebras

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Let R be a unital algebra over a field K . For idempotents $e, f \in R$, we define $e \leq f$ if and only if $ef = e = fe$. Let $e \wedge f$ and $e \vee f$ denote the infimum and supremum of e and f , respectively, if they exist. Let $e' := 1 - e$ for an idempotent $e \in R$. We prove the following theorem: Let $e, f \in R$ be nontrivial idempotents. Suppose that there exists $p(\lambda) \in K[\lambda]$ with zero constant term such that $p(ef) = p(fe)$ and $p(1) = 1$. Then $e \wedge f = p(ef)$ and $e \vee f = 1 - p(e'f')$.

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