

Meeting: 1004, Bowling Green, Kentucky, SS 11A, Special Session on Commutative Ring Theory

1004-13-268 **Sharon Magdalene Clarke*** (sharon.clarke@pepperdine.edu), 24255 Pacific Coast Highway, Malibu, CA 90263, and **Daniel D. Anderson**. *When the v -Operation Distributes Over Intersections*. Preliminary report.

Let D be an integral domain. It is well known and easily proved that for $A \in F(D)$ with $A = \sum A_\alpha$ where each $A_\alpha \in F(D)$, we have $A^{-1} = (\sum A_\alpha)^{-1} = \bigcap A_\alpha^{-1}$. Since \sum and \bigcap are dual, this raises the question of whether $(\bigcap A_\alpha)^{-1} = \sum A_\alpha^{-1}$ where $\{A_\alpha\} \subseteq F(D)$ with $\bigcap A_\alpha \neq 0$. We investigate when $(\bigcap A_\alpha)^{-1} = \sum A_\alpha^{-1}$ or $(\bigcap A_\alpha)^{-1} = (\sum A_\alpha^{-1})_v$ (equivalently, $(\bigcap A_\alpha)_v = \bigcap (A_\alpha)_v$) for certain families $\{A_\alpha\}$ of fractional ideals of D . (Received January 25, 2005)