

1107-13-498

Angela Kohlhaas* (angela.kohlhaas@loras.edu). *Coefficient Ideals and Cores in Dimension Two.*

Let I be an (x, y) -primary monomial ideal in $k[x, y]$ or an \mathfrak{m} -primary ideal in a regular local ring (R, \mathfrak{m}) of dimension two. The coefficient ideal of I is the largest ideal \mathfrak{a} satisfying $\mathfrak{a}I = \mathfrak{a}J$, where J is any minimal reduction of I , and the core is the intersection of all reductions of I . We find an explicit formula for the coefficient ideal of I by linking it to a certain ideal of reduction number one. In the monomial case, this leads to an Alexander-like duality between exponent sets, which we in turn use to explicitly describe the core of I . (Received January 20, 2015)