

1020-05-199

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Isabella Novik. *Face ring multiplicity via CM-connectivity sequences.*

Let $R = k[x_1, \dots, x_n]/I$ be a homogeneous quotient of a polynomial ring. Huneke, Herzog and Srinivasan have conjectured upper and (when R is Cohen-Macaulay) lower bounds for the multiplicity of R strictly in terms of the minimal and maximal degrees occurring in a (minimal) resolution of R . We verify the lower bound for several types of face rings. These include face rings of two-dimensional Cohen-Macaulay complexes, Gorenstein complexes of dimension three and four and large classes of doubly Cohen-Macaulay posets. This is joint work with Isabella Novik (U. of Washington). (Received August 28, 2006)