

1081-13-193

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MO 65211. *Polynomial and non polynomial behavior of homological functions of powers of ideals.*

Suppose that I is a homogeneous ideal in a polynomial ring R over a field k . We consider the related homological functions $a^i(I^n)$, $\text{reg}_i(I^n)$ and $\text{reg}(I^n)$, and discuss their asymptotic behavior. (Received February 11, 2012)