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Symbolic Defect and Cover Ideals

Let R be a commutative Noetherian ring, and let I be an ideal in R . The symbolic defect is a numerical measurement of the difference between the symbolic and ordinary powers of I . In the case that I has sufficiently well-behaved symbolic powers (i.e. its symbolic Rees algebra is finitely generated) we prove that the symbolic defect grows eventually quasi-polynomially. Furthermore, we describe more specifically the growth of the symbolic defect in certain classes of ideals arising from graphs, termed cover ideals.