

**Title:** How to count degrees of a projective variety?

**Abstract:** An affine variety is essentially the zero set of some polynomials and a projective variety is built from patching together finitely many such affine varieties. One reason to focus on projective varieties over affine varieties is that the former is a good framework for intersection theory. For example, two parallel lines in an affine plane do not intersect. But they do intersect at exactly one point in the projective plane. This is essentially due to a celebrated theorem of Bézout. Furthermore, It is natural to ask if we can generalize this result in higher dimensional projective spaces. Turns out we can, given we have a notion of the degree of a variety. We will start with describing what affine and projective varieties are before giving a definition of degree. We will finish by computing the degree of some varieties in arbitrary projective space.