

¹ means that the theorem was already stated and proved giving an upper bound for the degree, and I proved that the bound is strict.

² means that the theorem was already stated and proven in some weaker or incomplete way

³ means that the theorem was already stated, but not proved.

The rest are own results.

1 Polynomial part

1.1 Building precise environment

- Defining polynomial moving point/lines by using bivariate homogeneous coordinates instead of polynomials to simplify proofs.
- Using space $\mathbb{CP}^n$ with the standard structure to handle points at infinity.
- Defining all kinds of multiplicities
- Proving general useful theorems about the multiplicities.
- Proving that everything is well defined
- Proving that a polynomial point is holomorphic, so that we can talk about its local derivatives.

1.2 Theorems proven

- Projective, and pole-polar transformations preserve degree ²
- Exact formula to the degree of the following statements:
 - A point is on a line
 - 3 points are collinear ¹, 3 lines are concurrent ¹
 - 2 points on a line are coinciding
 - 2 points on a conic are coinciding
- Exact formula to the degree of a line through two points ¹
- Exact formula to the degree of the intersection point of two lines ¹
- Giving the locus of a polynomial moving point and giving the number of times the moving point passes through each point of the locus ³
- Mászó-theorem and its inverse theorem ²

2 Square root part

2.1 Building precise environment

- Defining the set in which the coordinates of a square root point/line are.
- Defining square root point/line pairs and its degree, dealing with the unambiguity of $\sqrt{x}$ in $\mathbb{C}$.
- Proving that square root degree is always a half-integer.
- Calculating the intersection of a polynomial line of degree n and a fixed conic, and proving that the intersection points are of degree n
- Giving sufficient condition for the intersection points to be polynomial
- Defining square root multiplicities
- Stating and proving the square root version of all theorems in the polynomial part (except Locus-theorem, which is just a conjecture)