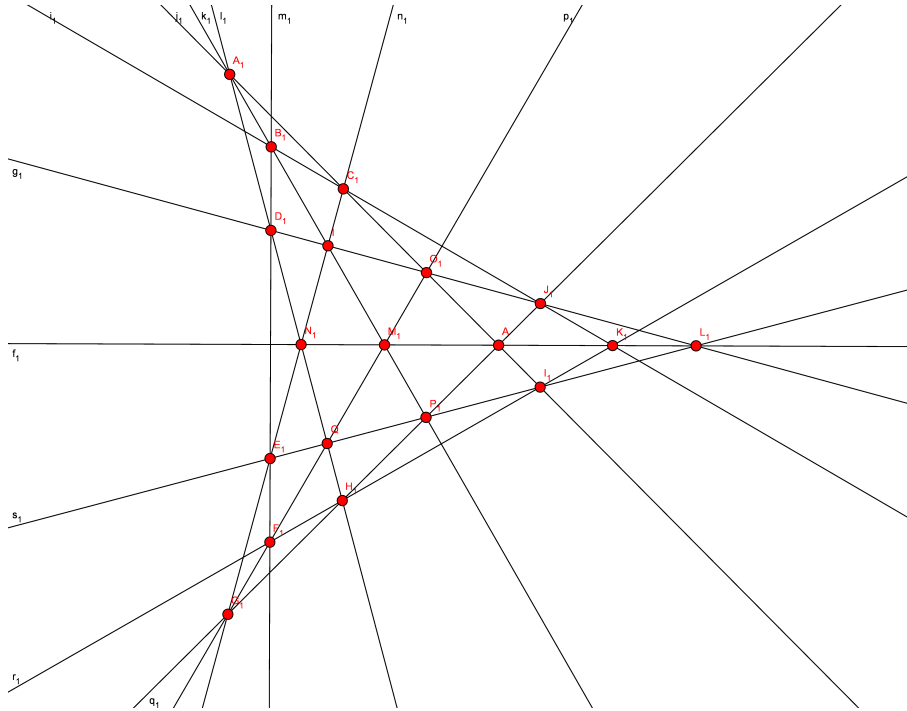


Interesting Ideals

Description for general public
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In the Project we consider ideals (some sets of polynomials) having interesting properties. For example, the set of points in the picture below gives us the ideal having an unexpected property.



Taking the set of all lines in the picture, multiplying all equations of these lines we get an equation of a function which passes through these points with multiplicity three. It turns out, that this function cannot be expressed as a sum of products of two ideal members, this means it is not in the second power of the ideal. This behaviour is quite unexpected, as for example for general points in the plane any function passing through these points with multiplicity three belongs to the second power of the ideal. The aim of the Project is to investigate ideals having such, or similar, interesting behaviour.