1. Structure of the manuscript

The content of the manuscript reaches its main aim through the following milestones. Firstly, we perform a detailed discussion on polynomials P, we show all their implicit forms and discuss the main properties. Finally, for the first milestone, we arrive to the identity between odd-powered Binomial (and Multinomial) expansions and partial case of P. As next step, we establish a relation between the polynomials P and discrete convolution of piecewise defined power function. This relation is consequence of the following claims

- P is in relation with the power sum Q.
- Discrete convolution of piecewise defined power function is partial case of the power sum Q.
- P is in relation with discrete convolution.

Then, the subsection [name] particularise obtained results to show the relation between Binomial (and Multinomial) theorem and the discrete convolution of piecewise defined power function. After, the straightforward section named [name] discuss the finite differences and derivatives of power function applying an identity between binomial theorem and convolution.