

# How to calculate the roots of an arbitrary polinomial :

## Hadamard and Vandermonde determinants and Bernoulli – Euler – Lagrange – Aitken type numerical method for roots of polynomials

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### Abstract

We develop Euler – Lagrange method and calculate all the roots of an arbitrary complex polynomial  $P(z)$  on the base of calculation (similar to the Bernoulli – Aitken methods) of the limits of ratios of Hadamard determinants built by means of coefficients of expansions into Taylor and Laurent series of the function  $\frac{P'(z)}{P(z)}$ .