In this thesis, we deal with the finding of an enclosure of the range of the real and interval polynomials in one variable. There are presented functional forms of the real polynomials which we implemented in the Matlab environment that is using interval arithmetic of the toolbox INTLAB. These forms can be used to effectively evaluate an enclosure of a polynomial. In the theoretical part there is introduced a reduction that makes possible to use an arbitrary functional form computing an enclosure of a real polynomial to evaluate an enclosure of interval polynomial. A numerical comparison is also the part of this thesis. Based on its results we designed two global functions solving our problem that apply one of the forms. A user has a possibility to indirectly influence the choice of the form by non-mandatory parameter that is specifying the strategy of computation. This parameter defines speed of evaluation and the amount of overestimation of the computed interval.