This work focuses on the determinants of interval matrices. After a short introduction into interval arithmetics, the works focus on time complexity of computation tight enclosures of interval determinants, we show what complexity class this problem belongs to and how hard is approximation with relative and absolute error. Next chapter works with various preconditions of a matrix, which could lead to better results. After we analyse preconditioning of matrices we show several methods for computing determinants, starting with Gauss elimination, ending method using Cramer's rule. We also ponder about special cases of matrices like symmetric, tridiagonal and Toeplitz. At the end we test shown methods.