

## Laboratory Class 2

**Group 1** (see <http://pr.ssdi.di.fct.unl.pt/1617/web/resources/Lecture3.pdf>)

Implement the extended interval arithmetic version of the division operator.

**Group 2**

Implement a Class to handle multivariate polynomials: differentiates, evaluates and prints multivariate polynomials in a space of  $n$  dimensions.

**Group 3** (see <http://pr.ssdi.di.fct.unl.pt/1617/web/resources/Lecture3.pdf>)

Implement a Newton step operator for multivariate polynomials (group 2) that uses the division operator implemented in group 1.

**Group 4** (see <http://pr.ssdi.di.fct.unl.pt/1617/web/resources/Lecture3.pdf>)

Implement a Newton narrowing operator for multivariate polynomials (group 2) that uses the Newton step operator implemented in group 3.