Informatik - Exercise Session
Numerical representation

1. Perform the following steps:
   1.1 Convert the integer numbers $a = 4$ and $b = 7$ into their binary representation.
   1.2 Add the binary representations.
   1.3 Convert the result into decimal.
2. Evaluate the following expressions:
   2.1 `5 < 4 < 1`
   2.2 `true > false`

Compute the binary expansions of the following decimal numbers.

1. 0.25
2. 11.1

State the following numbers in $F^*(2, 4, -2, 2)$:

1. the largest number;
2. the smallest number;
3. the smallest non-negative number.

Compute how many numbers are in the set $F^*(2, 4, -2, 2)$.

Add $1.001 \cdot 2^{-1}$ (i.e. 0.5625) and $1.111 \cdot 2^{-2}$ (i.e. 0.46875) in $F^*(2, 4, -2, 2)$.