Abstract syntax: N ∈ **Nml** binary numerals

Semantic domains: **Z** = real numbers

Semantic function: N: **Nml** → **N** N[[I . F]] = N[[I]] + N[[F]] N[[I0]] = 2 * N[[I]] N[[I1]] = 2 * N[[I]] + 1
N[[0F]] = N[[F]] / 2 N[[1F]] = (N[[F]] + 1) / 2 N[[0]] = 0 N[[1]] = 1

N ::= I . F
I ::= B | I0 | I1
F ::= B | 0F | 1F
B ::= 0 | 1