Computer Arithmetic - Spring 2000

Assignment No. 2

Course homepage: http://www.eng.tau.ac.il/~guy/arith00/

Deadline: May 30th.

The questions refer to the following papers:

- Even and Paul, "On The Design of IEEE Compliant Floating Point Units", to appear in IEEE trans. on Computers. `http://www.eng.tau.ac.il/~guy/Papers/IEEE_Rounding.ps.gz`
- Mueller and Paul, excerpt from Vol 2 of "The Complexity of Simple Computer Architectures". `http://www-wjp.cs.uni-sb.de/~smueller/MP99ieee.ps.gz`

Questions:

1. Prove Lemma 7.3 in the chapter of Mueller & Paul.
2. Prove the Decomposition Theorem (sec. 7.2.6. in Mueller & Paul).
3. Design a rounding unit that computes the 4 steps of rounding according to the Decomposition Theorem.