

## Preparation guide for Quiz 01

Most of the exam problems will be closely related to your homework problems. Make sure you understand all of them.

1. Study the details about floating point binary expressions, such as how to turn a decimal 0.2 into a binary expression and vice versa.
2. Study the details about IEEE single (double) precision arithmetics such as, "Why does it take 32 (64) bits to store a single (double) precision floating point number?", "How is machine epsilon obtained?", etc.
3. Study the derivation of the upper bound for relative error cause by chopping and rounding.
4. Understand how floating errors are amplified through multiplication and division.
5. Understand the source of loss of significance caused by subtraction and how to avoid them. Study the examples in the textbook.
6. Understand the source of instability for recurrence formula.
7. Understand rate of convergence.
8. Learn/review how to call a subroutine/function in your programming language.