Homework Assignments: HW # 6
CMSE 823: Numerical Linear Algebra

Do textbook problems

1. Lecture 11: 11.1
2. Lecture 12: 12.3.
3. Lecture 13: 13.3.
4. Using single precision, evaluate the expression by hand only,

$$a = 1000\left(\frac{c}{\sqrt{b^2+c}-b} - 2b\right)$$

when $b = 1$ and $c = 0.004004$. Compare the computed value of a with the exact value $a = 2$. Show that a can be written

$$a = \frac{1000c}{\sqrt{b^2+c}+b}.$$

Now evaluate a again when $b = 1$ and $c = 0.004004$. Explain why this second expression is more accurate.

Due date: Thursday, Feb. 21. In class.