MATH 211: HOMEWORK 1

Book problems

Abbreviation used: MAT = MATLAB is recommended for this problem

Section 1.2. Computer Arithmetic

Problem 2ab

Problem 10 (MAT. Hint: *write exp(1) in MATLAB to get the value of e to computer precision. You aren't required to use nesting here, you can use the MATLAB factorial function.*)

Problem 15ab (MAT)

Section 1.3. Algorithms

Problem 7ad

Problem 8

Problem 9 (MAT). Instructions: Write the code explicitly instead of hand-writing the outline of the algorithm. Let n and x_0 be a variable the user can change, and let a be an array of size n that the user can change. At the beginning of the code, write $n = 5; a = 0 : n; x0 = .1;$ as default parameters. Here $a(i)$ corresponds to a_{i-1} from the book. Note that $a(i) = i - 1$, and the possible values of i range from $1, \cdots, n+1$ as this is the MATLAB indexing notation. In principle the user can change them, but for grading purposes leave these values. The code should print

$$P(x0) = value,$$

where *value* is replaced by the value of $P(x_0)$ computed via a nested algorithm.

Date: today.