You will write functions

- \(c = \text{my\_mult}(a, b, \text{precision});\)
- \(d = \text{my\_plus}(a, b, \text{precision});\)

The functions \texttt{my\_mult} and \texttt{my\_plus} should simulate floating point multiplication and floating point addition with precision base ten “bits” (and output matlab’s internal full precision arithmetic if \text{precision}= 0). Hint: write a third function that acts as the “fl” operation in MAALA 1.5, and use it in the two functions you will turn in.

Extra practice problems (these will not be graded):

Write a function

\[C = \text{my\_precision\_matrix\_multiplication}(A, B, \text{precision});\]

This function should take as inputs matrices \(A\) and \(B\), and output the matrix product \(AB\), all computed to the specified precision (and output matlab’s internal full precision arithmetic if \text{precision}= 0).

Write a function

\[x = \text{my\_precision\_ge}(A, b, \text{precision});\]

This function should take as input a square \(n \times n\) matrix \(A\) and \(n\) vector \(b\), and output a solution to \(Ax = b\), computed using Gaussian elimination with no pivoting, using arithmetic with the specified precision. The code should warn if there is no solution or if the solution is non-unique.