Lab 9: Chain Matrix Multiplication Problem

In this lab you will implement the dynamic programming algorithm to solve the chain matrix multiplication problem with minimum number of operations.
Given: a sequence of matrices A_1,…, A_n and dimensions D_0,…,D_n where A_i is of dimension D_{i-1} x D_i, determine the optimal order of multiplications.

Demonstrate your algorithm on this input as well as several other ones to show that it works.

A_1 10x20 (dimensions)
A_2: 20x30
A_3: 30x40

A_4: 40x50

A_5: 50 x40

A_6: 40 x10

A_7: 10 x 50

A_8: 50 x 20