CSC373 Worksheet 3 Solution

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1. **Notes:**

- Dynamic Programming
  - Is applied to optimization problems
  - Applies when the subproblems overlap
  - Uses the following sequence of steps
    1. Characterize the structure of an optimal solution
    2. Recursively define the value of an optimal solution
    3. Construct an optimal solution from computed information

- Matrix-chain Multiplication
  - is an optimization problem that can be solved using dynamic programming
  - goal is to find matrix parenthesis with fewest number of operations

    e.g

    Given chain of matrices $< A, B, C, D >$, it's fully parenthesized product is: