

Name (Print) _____

Quiz 4
CPSC 411 Spring 2009

Problem 1 (2 Points)

Name the two key properties that are common to the successful application of the dynamic programming paradigm. [Hint: One property is also characteristic of the greedy paradigm.]

Problem 2 (2 Points)

In the matrix chain order problem, an array M is maintained to calculate the cost of multiplying the i th through j th matrix, that is, the cost of the matrix product $A_i \cdots A_j$. The array is initialized in the as follows:

	1	2	3	4
1	0			
2	n/a	0		
3	n/a	n/a	0	
4	n/a	n/a	n/a	0

Explain in which order the remaining entries of the table are generated in the algorithm given in the lecture.

Problem 3 (1 Point)

What is the amortized cost of a sequence of m operations when the executing of this sequence of operations takes a total of $T(m)$ time?