

CSci 3501 Problem set 12

Due Thursday, Dec. 14 at midnight, accepted till Friday, Dec. 15th
5:30pm

Problem 1. Show the work of the matrix chain multiplication algorithm on matrices of the dimensions 5×20 , 20×30 , 30×15 , 15×20 , 20×10 . What is the optimal way of placing parentheses and how many multiplications does it result in?

Problem 2. CLRS, Exercise 16.1-1 on p. 378.

Problem 3. CLRS, Exercise 16.1-2 on p. 378-379.

Problem 4. Show the work and the result of the Huffman code algorithm for the following frequencies:

$$a : 10 \quad b : 20 \quad c : 30 \quad d : 15 \quad e : 25$$

Problem 5. CLRS, Exercise 16.3-6 p. 392.

Problem 6. CLRS, Exercise 24.1-1 p. 591.

That's all!