

CSci 3501 Assignment 12
Due Friday, December 12 in class.

Problem 1 (2 points). Sipser, Exercise 7.5 p. 294.

Problem 2 (9 points). Sipser, Exercise 7.6 p. 294.

Problem 3 (10 points). Show the work of the matrix chain multiplication algorithm on matrices of dimensions $5 \times 20, 20 \times 30, 30 \times 15, 15 \times 20, 20 \times 10$. Show all your work. Make sure to show the optimal way of placing parentheses and the resulting number of individual multiplications.

Problem 4 (9 points). CLRS, Exercises 16.1-1, 16.1-2 p. 378.

Problem 5 (8 points). Show the work and the result of the Huffman code algorithm for the following frequencies:

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