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**Today** MATRIX-CHAIN-ORDER; dynamic prog.; alg. analysis. §§ 15.{2,3}; 1.\*, 3.\*. **Next class** Homework 1 due. Dynamic Programming contd. §§ 15.4,5. **Reminders** Homework. Newsgroup. Reading. Coding. Practice. Don't fall behind.

- 1. List the members of your group below. Underline your name.
- 2. Depict tables similar to those in Figure 15.5 of the textbook for MATRIX-CHAIN-ORDER on the following input:

| matrix:    | $A_1$           | $A_2$           | $A_3$           | $A_4$          | $A_5$          | _ |
|------------|-----------------|-----------------|-----------------|----------------|----------------|---|
| dimension: | $100 \times 30$ | $30 \times 100$ | $100 \times 30$ | $30 \times 70$ | $70 \times 10$ |   |

- 3. (a) Provide pseudocode for binary search of an array of ints.
  - (b) Provide a brief English explanation of why your pseudocode is correct.
  - (c) Prove the correctness of your pseudocode using loop invariants, etc.