1. Work in groups of 2–4 people. List the members of your group below. Underline your name.

2. State (1) which of the following *codes* are *prefix-free* and (2) which are *fixed-length*, explaining your answers.

    (a) $(a, b, c, d) = (00, 01, 10, 11)$
    (b) $(a, b, c, d) = (0, 10, 11, 1)$
    (c) $(a, b, c, d) = (0, 10, 11, 101)$

3. Depict trees similar to those in the textbook's Figure 15.5 (p. 433) for each of the codes of Question 2, using the frequencies $(30, 10, 40, 5)$ for (a, b, c, d) respectively. Compute the *cost* of each tree.

4. Trace the execution of the textbook's HUFFMAN pseudocode (p. 434) on the input of Question 3, using the textbook's Figure 15.6 (p. 435) as a model.

Frequencies: $(a, b, c, d) \mapsto (30, 10, 40, 5)$