1. List the members of your group below. Underline your name.

2. Prove or disprove the following from first principles.

   (a) $\log n = O(n)$

   (b) $n^3 = o(2^n)$

3. Define *maximum contiguous subsequence (MCS)*.

4. Prove or disprove: Every sequence has a unique MCS.

5. Trace the MCS computation for the sequence $(2, -3, 4, 2, -1, 3)$ using the $O(n^2)$ algorithm from the textbook. Prove the $O(n^2)$ claim. Is the algorithm $\Theta(n^2)$? Explain.