Exercise 17.1-2. In the worst case INCREMENT from 01111 to 10000 requires k flips. In DECREMENT also going from 10000 to 01111 takes k flips. Hence n such operations will have a complexity of O(nk).

Exercise 17.2-1. Assign 2 points for PUSH operation and 0 for POP and COPY operations. For every element pushed into the stack there will be an extra credit, which can be used to POP or COPY the element. Hence, time complexity: O(n).

Exercise 22.2-7. Represent the wrestlers as nodes, and the rivalries between them as edges. Run BFS from any of the nodes and visit all the nodes and update their distances from the Source. All odd distance wrestlers can fall into one group and even distance wrestlers can fall into the other. While performing BFS if you find two adjacent nodes being allocated to the same group, return false, as the division is not possible. This is the case of odd sized loops in the group, which cannot be split into a bipartite graph.

Runtime Complexity: Same as BFS O(n+r).