Instructions. This activity will be completed in groups.

- Self-organize into groups of 3 or 4.
- Find an available spot on the board.
- Work together, as a group, on solving the questions in the order they appear on the sheet.
- Write your answers on the board, and make sure that one of you is ready to discuss these answers.

Part 1 - 10 minutes

For the graph shown in Figure 1, solve the following:

1. Represent the graph using an adjacency matrix.
2. How big is the matrix (number of entries)?
3. How big is this space proportional to n?
4. Given two vertex IDs, what is the worst case complexity of finding an edge?
5. Given a vertex ID, what is the worst case complexity of deleting this vertex?

Part 2 - 10 minutes

Again, for the graph shown in Figure 1, solve the following:

1. Represent the graph using an adjacency list.
2. How big is the space proportional to n?
3. Given two vertex IDs, what is the worst case complexity of finding an edge?
4. Given a vertex ID, what is the worst case complexity of deleting this vertex?