Homework III: Graph Metrics

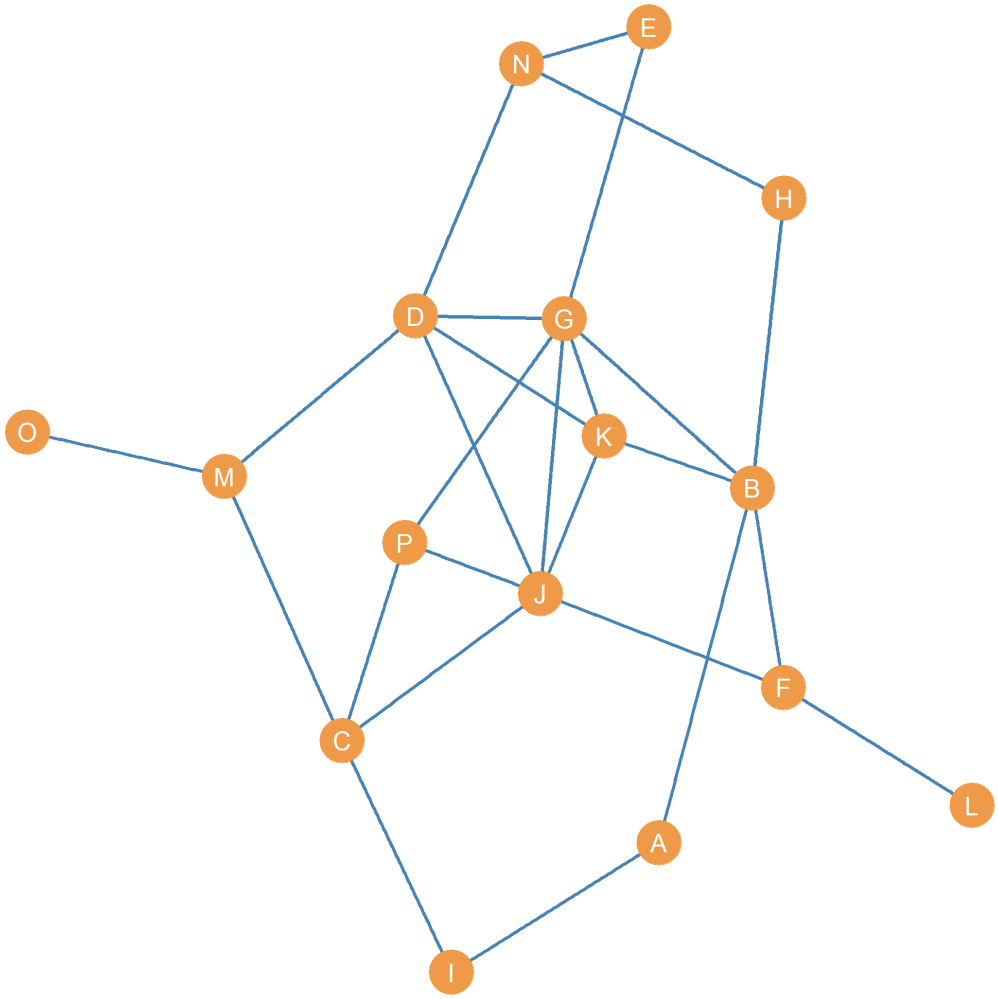

Figure 1: An undirected graph.

Consider the graph shown in Figure 1:

1. What is the **order** of the graph?

2. Write down the graph's **degree sequence**:

3. What is the graph's **degree range**?

4. What is the graph's **sum of degrees**?

5. What is the **size** of the graph?

6. What is the graph's **average degree**?

7. What is the graph's **maximum size**?

8. Compute the **density** of the graph:

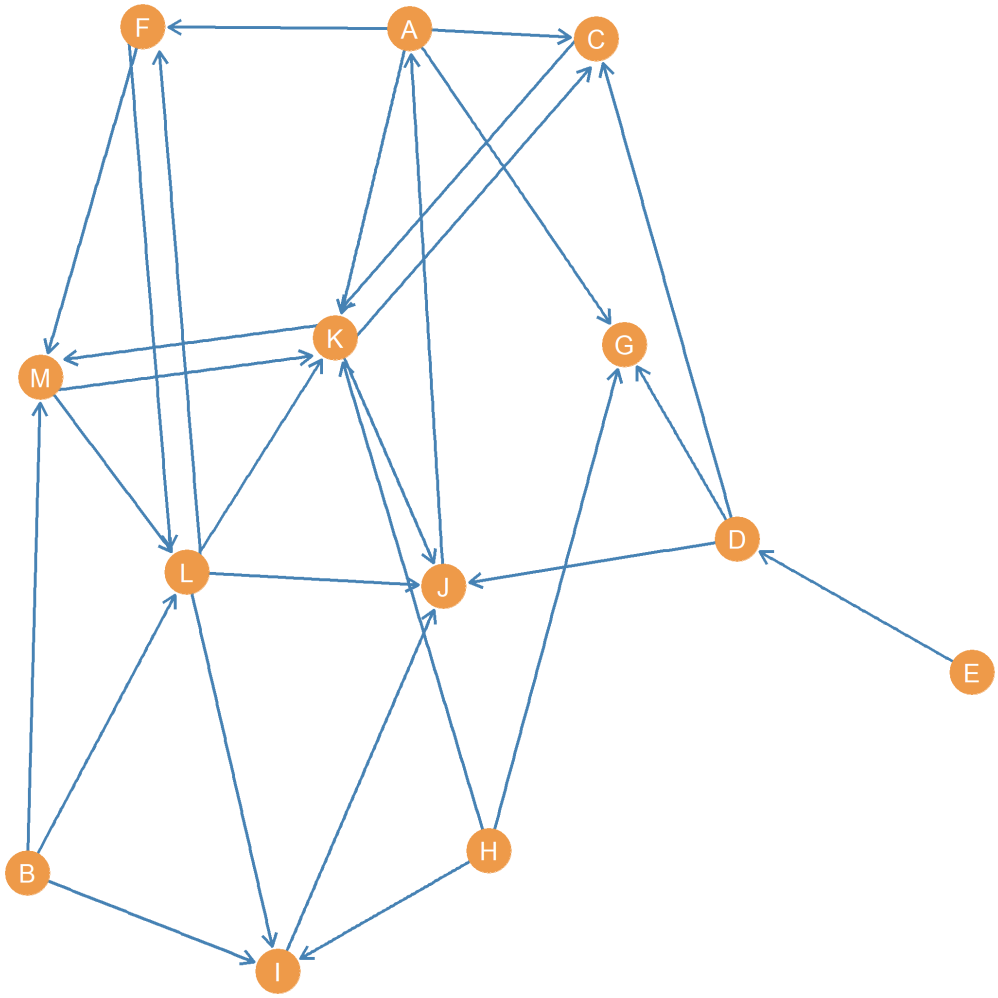

Figure 2: A directed graph.

Consider the graph shown in Figure 2:

1. What is the graph's **out-degree sequence**?

2. What is the graph's **in-degree sequence**?

3. What is the graph's **out-degree range**?

4. What is the graph's **in-degree range**?

5. What is the graph's **sum of degrees**?

6. What is the **size** of the graph?

7. What is the graph's **maximum size**?

8. Compute the **density** of the graph: