1. Consider the graph below. This graph has 6 vertices and 9 edges, it is directed or undirected (circle one), and it is weighted or unweighted (circle one) It has 1 connected components.

2. Let $G = (V, E)$ be an undirected graph, and let $n = |V|$ and $m = |E|$. An adjacency-list representation of $G$ requires $O(n + m)$ storage, while an adjacency-matrix representation of $G$ requires $O(n^2)$ storage.

3. **True** or False: Let $G = (V, E)$ be an undirected graph, and let $n = |V|$ and $m = |E|$. Then, $m = O(n^2)$.

4. Consider the graph below. This graph has 7 vertices and 10 edges, it is directed or undirected (circle one), and it is weighted or unweighted (circle one) The maximum indegree and outdegree of the graph are 2 and 3, respectively, and are realized by vertices d, b, g, e and c, respectively. The minimum indegree and outdegree of the graph are 0 and 1, respectively, and are realized by vertices c and a, b, d, e, g, respectively.