Graphing the Spread of Disease Assessment Answer Key

1. What is the vertex list for this graph?
   1, 2, 3, 4, 5, 6

2. What is the edge list for this graph?
   (1, 2), (1, 5), (2, 3), (2, 5), (3, 4), (4, 5), (4, 6)

3. What is the adjacency matrix for this graph?

   \[
   \begin{array}{cccccc}
   0 & 1 & 0 & 0 & 1 & 0 \\
   1 & 0 & 1 & 0 & 1 & 0 \\
   0 & 1 & 0 & 1 & 0 & 0 \\
   0 & 0 & 1 & 0 & 1 & 1 \\
   1 & 1 & 0 & 1 & 0 & 0 \\
   0 & 0 & 0 & 1 & 0 & 0 \\
   \end{array}
   \]

4. What is the adjacency list for this graph?

   \[
   \{1 \ 2 \ 5\} \\
   \{2 \ 1 \ 3 \ 5\} \\
   \{3 \ 2 \ 4\} \\
   \{4 \ 3 \ 5 \ 6\} \\
   \{5 \ 1 \ 2 \ 4\} \\
   \{6 \ 4\} \\
   \]

5. Starting at vertex 1 and using a DFS search, what would be the visitation order of the vertices? Do the same for a BFS search.
   
   A DFS search has a visitation order of: 1, 2, 3, 4, 5, 6
   A BFS search has a visitation order of: 1, 2, 5, 3, 4, 6