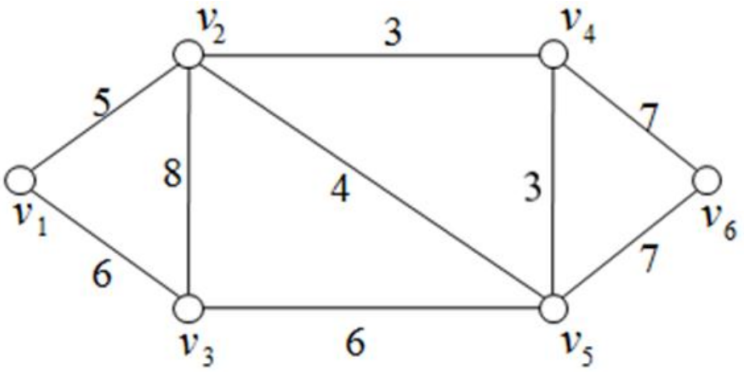
Graphs

1. Find the following objects for the weighted graph shown below:



   (a) A breadth-first spanning tree rooted at v_1.

   (b) A depth-first spanning tree rooted at v_1.

   (c) A shortest path tree rooted at v_1.

   (d) A minimum spanning tree.