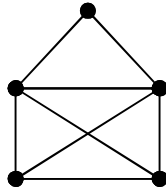


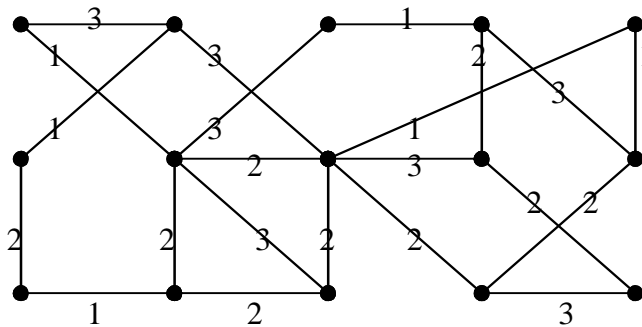
**CMPE 177**  
**Applied Graph Theory and Algorithms**  
**Summer 2009**

**Midterm 2 Review Problems**

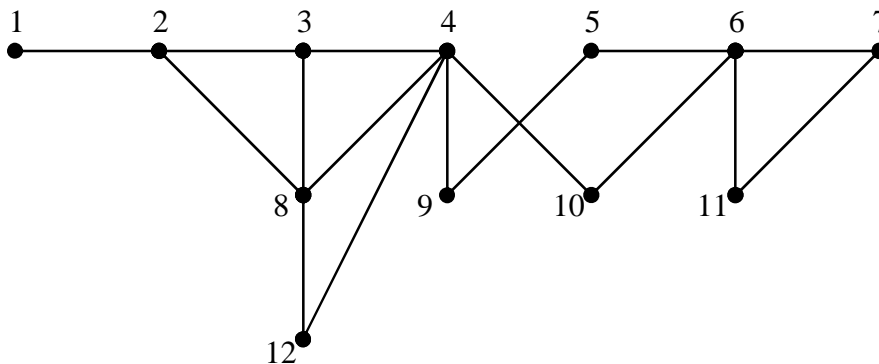
- Determine the number of spanning trees in the following graph. You may use the formula developed in homework 4, the matrix tree theorem, Cayley's theorem, or any combination of these results.



- (20 Points) Find a minimum weight spanning tree in the following weighted graph. Indicate the edges which belong to the spanning tree by shading them. Calculate the total weight of your tree.



- Trace BFS on the following graph with
  - vertex 1 as source.
  - vertex 7 as source.
  - Vertex 12 as source.



- Determine the diameter and radius of the above graph.