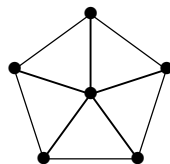


Math 485 Homework 7
Fall 2007
Due: Friday, October 26

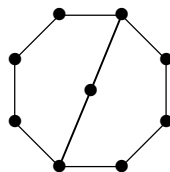
In all the problems, indicate how you arrived at your answer and explain your work.

1. Determine $\tau(G)$ for the following graphs using the recursive algorithm.

(a)

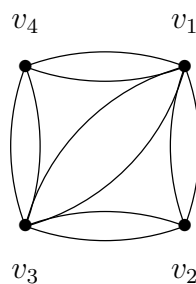


(b)



2. For $m \geq 1$, determine $\tau(K_{2,m})$.

3. Let G be the following graph:



Find the matrix Q for this graph, and use the Matrix Tree Theorem to compute $\tau(G)$.

4. Use the Matrix Tree Theorem to compute $\tau(K_{r,s})$ for $r, s \geq 1$.
5. Let G be a weighted graph in which all the edge weights are distinct. Show that there is a unique spanning tree of minimum total weight.