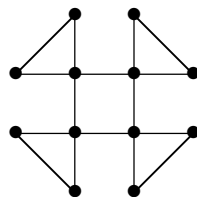


Math 485 Homework 11
Fall 2007
Due: *Wednesday, December 12*

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

1. Show that a graph G is 2-connected if and only if for any three distinct vertices x , y , and z , there is an x,z -path which includes y .
2. Let G be a connected graph with blocks B_1, \dots, B_k .
 - (a) Find a formula for the number of spanning trees of G , $\tau(G)$, in terms of $\tau(B_1), \dots, \tau(B_k)$.
 - (b) Use part (a) to find $\tau(G)$ for the graph below:



3. Problem 4.1.8 on page 158 of the textbook.
4. Problem 4.2.1 on page 172 of the textbook.