# Math 55: Homework 12 

Due Friday, August 7

1. Find a counterexample to the statement: "The diameter of a graph is the length of its longest path."
2. Prove that the statement above is true for trees.
3. There is one possible structure for ethane $\left(C_{2} H_{6}\right)$. Draw the graph associated with this structure and find the number of automorphisms of the graph.
