CS-174   Quiz 2   February 27, 1992
David Wolfe

1. Start with a cycle on n edges and n nodes. Then remove each edge with probability $1 - p$. Give an expression for the expected number of paths remaining in the graph. (Hint: How many paths of length k are there in the original cycle?)

2. A triangle is completely triangulated by n internal vertices. (No additional vertices are added on the boundary.) What is the number of small triangles in the triangulation? (You should also prove that this number does not depend on the triangulation.)