Math 213
Sections 9.1, 9.2, & 9.3

Form yourselves into groups of four to answer the following questions. Turn in one copy for each group with all the group member's names on it. This worksheet is due Tuesday 8/18 by 4:30 pm in my box.

1. Use a geometric model to find the number of handshakes that take place at a (small) party of 4 people if each person shakes hands with every one else. Hint: think about people as points and handshakes as lines.

2. Repeat exercise 1 with 5 people.

3. Repeat the exercise with 25 people.

4. Generalize the exercises above to a party with n people. Give full and clear justification for your formula.

5. Question 12 from 9.2 on page 598

   (a) Fold a rectangular piece of paper to create a square. Describe your procedure in writing. Explain why your approach creates a square.

   (b) Crease the square from the above so that the two diagonals are shown. Use paper folding to show that the diagonals of a square are congruent and perpendicular and bisect each other. Describe your procedure and explain why it works.

6. Try the "Now try this 9-10" on page 604, parts a and b. Take note of Theorem 9-5 that follows from your work.