Math 102
Problem Solving Activity

Instructions: Work together with your group to solve the following problems using the problem solving strategies that we have been discussing in class. Make sure at least one member of your group records the reasoning you used to arrive at your solution. You do not have to work these problems in order. Once you have found a solution to one of the problems, let me know and I can check to see if both your reasoning and your answer is correct. If you get stuck, ask me and I may be willing to give you a hint about how to proceed.

1. Suppose that 32 students signed up for classes during an orientation session. If exactly 20 of them signed up for Chemistry and exactly 16 of them signed up for English, how many of them signed up for both Chemistry *and* English?

2. Suppose that Bob has 8 shirts and 4 pairs of pants. How many different outfits can Bob make by combining one shirt with one pair of pants?

3. Suppose you work at a bowling alley. After work one day, you decide to line up bowling pins in a triangular pattern with one pin in the first row, two pins in the second, three pins in the third, and so on.

   (a) How many total pins would you need to use in order to complete 4 rows?

   (b) How many total pins would you need to use in order to complete 10 rows?

   (c) How many total pins would you need to use in order to complete 100 rows? How about 1000 rows?