

**MATH 4010**  
**Problem set 2**  
**Due date: 9/5/07**

Name \_\_\_\_\_

Please attach the appropriate cover sheet to your assignment. Remember that it must be stapled if you are turning in a hard copy, and it can not be late. **To get full credit you must have neat work and show all your work!**

Referring to the Math4010 Info sheet, complete the following problems.

1. For each of the data categories (e.g. Colors, Flavors), draw a Venn diagram that represents all the information given. In each section of the diagram enter the number of students in that category, not their names.
2. For the Color set, list all the people who like all colors.
3. For the Flavors set, let  $V$  be the set of all people who like vanilla,  $C$  the set of all people who like chocolate and  $S$  the set of all people who like strawberry. Shade in  $V \setminus (S \cup C)$  and tell how many people are in this set.
4. For the subjects category, let  $E$  be the set of all people who like English,  $M$  the set of all people who like math and  $A$  the set of all people who like art. Shade in  $(E \cup A) \cap M$  and say how many people are in this set.
5. For the activities category, list the set of all people who do not like play games nor to work out.
6. In the transportation category find the intersection of the set of people who ride a bus or trax and the set of people who drive but do not carpool. Shade this set on your Venn diagram. Then give names to each set and use set operation symbols to describe the set you just shaded.

*From the book:*

pg. 42: Problems 12, 16

Section 2.1: 10, 11, 14, 17, 19, 29