1. From your text: Section 2.5 problem 2
A travel agent interviewed 180 people to determine whether they preferred traveling long distances by airplane or by automobile with the following results.
   120 like to travel by airplane
   90 like to travel by automobile
   50 like to travel by both
Enter these results in the Venn diagram remembering that:
   The total number of responses in the airplane circle = 120
   The total number of responses in the automobile circle = 90
   Of those 120 and 90, 50 responses belong in “both” circles, or in the intersection.
   The total in the Universe = 180
Use the diagram to answer the following.
   a. How many prefer to travel by airplane ONLY?
   b) How many prefer to travel by automobile ONLY?
   c) How many prefer not to travel by air or auto?

YOU TRY:
2. From your text: Section 2.5 problem 4
A congressional representative polled her constituents regarding two bills with the following results:
   55 favor bill A.
   100 favor bill B.
   40 favor both bills.
Make a Venn diagram and use the diagram to answer the following.
   a) How many favor bill A ONLY?
   b) How many favor bill B ONLY?
   c) How many favor neither bill?

THREE SETS:
3. From your text: Section 2.5 problem 6
The three major grain crops raised in the world are wheat, maize and rice. A survey of 40 countries that raise grain yielded the following results:
   18 countries raise wheat
   16 countries raise maize.
   12 countries raise rice.
   9 countries raise wheat AND maize.
   3 countries raise maize AND rice
   3 countries raise wheat AND rice.
   2 countries raise all three crops.
How many countries raised:
   a) none of the three corps?
   b) exactly one of the three crops?
   c) exactly two of the three crops?
   d) wheat and maize, but not rice?
   e) maize or rice, but not wheat?
You Try: Use Venn Diagrams to solve the following problems.

4. The results of 50 students showed the following preferences in writing instruments:
   - 16 liked pencils
   - 18 liked felt tip pens
   - 24 liked ballpoint pens
   - 4 liked pencils and felt tip pens
   - 5 liked felt tip pens and ballpoint pens
   - 8 liked pencils and ballpoint pens
   - 3 like all three.

Find the number of students that liked:
   a. None of the three writing instruments
   b. Pencils and felt tip pens but not ballpoint pens
   c. Only pencils
   d. Only ballpoint pens
   e. Felt tip pens or ballpoint pens

5. A company launching a new toothpaste took a survey to determine how many people preferred wintergreen, peppermint, or cherry flavors of the new toothpaste. One hundred people were questioned. The results were summarized as follows:
   - 44 preferred cherry
   - 40 preferred wintergreen
   - 37 preferred peppermint
   - 16 preferred peppermint and cherry
   - 15 preferred wintergreen and peppermint
   - 11 preferred wintergreen and cherry
   - 4 preferred all three flavors

Find the number of the participants who preferred:
   a. none of the new flavors
   b. only wintergreen
   c. cherry or wintergreen
   d. cherry or wintergreen but not peppermint

HW: Section 2.5 problems 1-7 odd and the practice test for test 1. (041)