

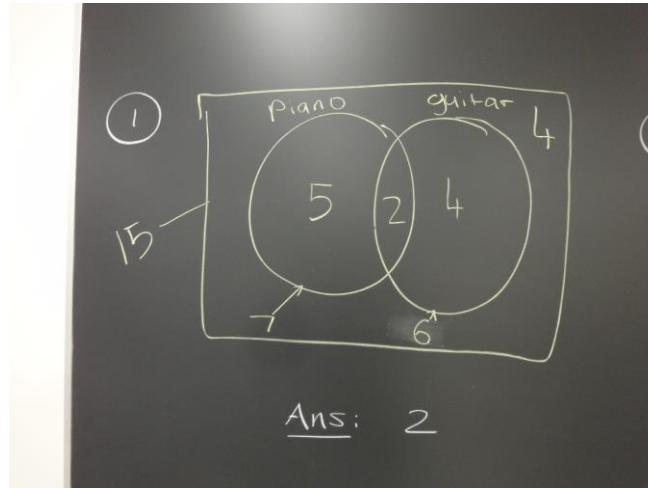
MATH 126

Problem Solving with Venn Diagrams

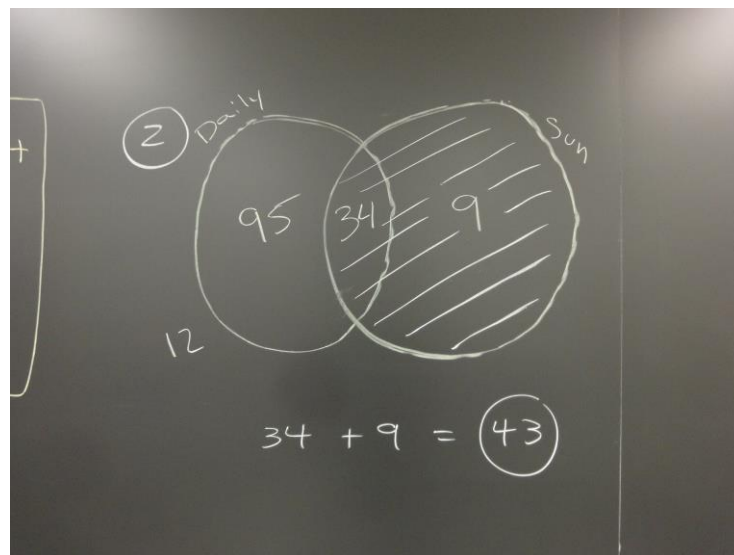
Part I

Directions: Draw a Venn diagram to assist in solving the following problems. Be sure to answer the original question posed.

1. In a music club with 15 members, 7 people played piano, 6 people played guitar, and four people didn't play either of these two instruments. How many people played both piano and guitar?

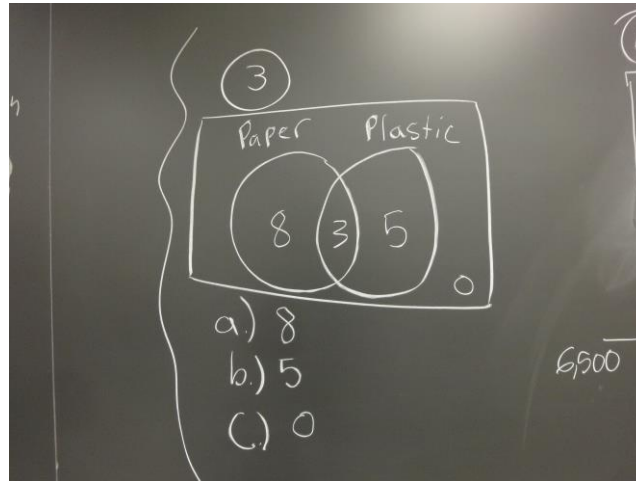


2. An elementary school class polled 150 people at a shopping center to determine how many read the *Daily News* and how many read the *Sun Gazette*. They found that 129 read the *Daily News*, 34 read both, and 12 read neither. How many read the *Sun Gazette*?



3. There were 16 recycling bins in the student union. Eight of them contained only paper, five contained only plastic, and three contained paper and plastic.

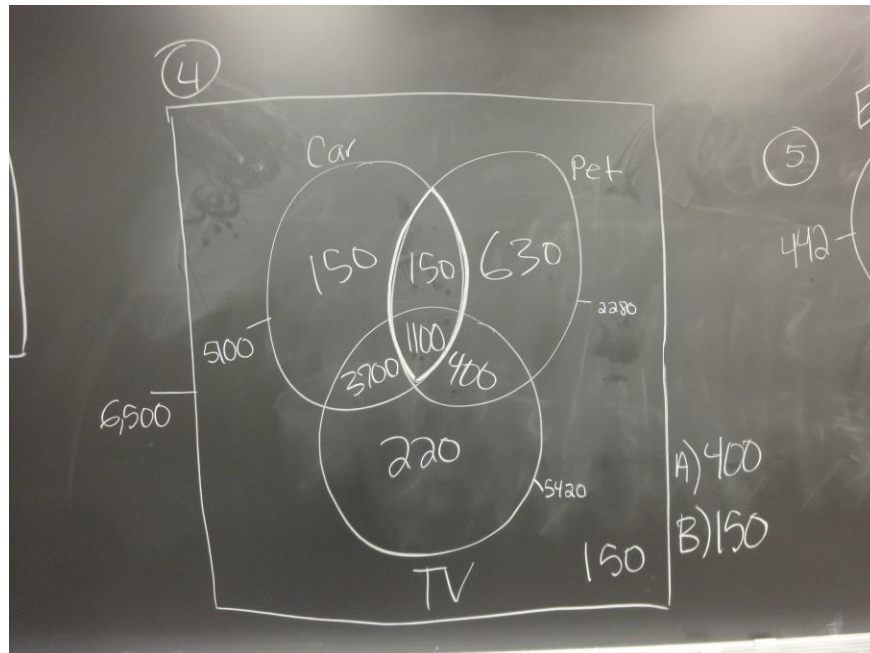
- (a) How many contained only paper?
- (b) How many contained only plastic?
- (c) How many contained neither paper nor plastic?



These require a bit more work:

4. In a large survey of 6500 people, 5100 had a car, 2280 had a pet, 5420 had a television, 4800 had a TV and a car, 1500 had a TV and a pet, 1250 had a car and a pet, and 1100 had all three.

- (a) How many people had a TV and a pet, but did not have a car?
- (b) How many people did not have a pet or a TV or a car?



5. During spring registration at a liberal arts college, 442 students registered for English, 187 registered for history, and 234 registered for mathematics. What is the greatest possible total number of different students who could have registered for these courses, if it is known that only 96 registered for both English and mathematics?

