1. If one can borrow a car every Monday, Tuesday, Wednesday, and every Tuesday, Thursday, and Friday, then how many days can one borrow the car per week?

2. Which of the sets are equal?

- $\{1,2,3\} \stackrel{?}{=} \{1,2,3\}$
- $\{1,2,3\} \stackrel{?}{=} \{1,2\}$
- $\{1,2,3\} \stackrel{?}{=} \{3,1,2\}$
- $\{1,2,3\} \stackrel{?}{=} \{1,2,2,3,3,3\}$
- $\{1,2,3\} \stackrel{?}{=} \{$ positive integers whose square has one digit $\}$
- $\{1,2,3\} \stackrel{?}{=} \{$ odd numbers less than 4 $\}$

3. Calculate the following unions and intersections:

- $\{1,2,3\} \cup \{3,4,5\} =$
- $\{1,2,3\} \cap \{3,4,5\} =$
- $\{1,2,3\} \cup \{1\} =$
- $\{1,2,3\} \cap \{1\} =$

4. Calculate the following differences:

- $\{1,2,3\} - \{1\}$
- $\{1,2,3\} - \{2,3\}$
- $\{1,2,3\} - \{3,4,5\}$
- $\{1,2,3\} - \{4,5,6\}$
- $\{1,2,3\} - \{1,2,3\}$

5. A standard 52-card deck of playing cards has the following cards:
A♡ 2♡ 3♡ 4♡ 5♡ 6♡ 7♡ 8♡ 9♡ 10♡ J♡ Q♡ K♡
A♢ 2♢ 3♢ 4♢ 5♢ 6♢ 7♢ 8♢ 9♢ 10♢ J♢ Q♢ K♢
A♣ 2♣ 3♣ 4♣ 5♣ 6♣ 7♣ 8♣ 9♣ 10♣ J♣ Q♣ K♣
A♠ 2♠ 3♠ 4♠ 5♠ 6♠ 7♠ 8♠ 9♠ 10♠ J♠ Q♠ K♠

If 5 people are playing, and each has been dealt 10 cards, then:

(a) Why must one of the suits (♡, ♢, ♣, ♠) be completely dealt out?

(b) Must at least two people have at least one clubs ♣?

(c) Must at least one person has at least two clubs ♣?

(d) Must every player have at least 3 of the same suit?

(e) Must some pair of neighbors have at least 6 of the same suit combined (it counts, even if one player has 6 all by themselves)