

1) Of the 30 people in both sides of Brianna's family (the Mulders and the Lambooy's) who got invitations to her bridal showers 12 could make it to the Lambooy shower, 2 could make it to both showers, and 1 person wasn't able to make it to either shower. How many people could go to the Mulder shower only?

2) A survey of 200 people yielded the following information: 94 people owned a motorcycle, 127 owned a boat, and 78 owned both. How many people owned each of the following?

- a) a motorcycle or a boat
- b) a motorcycle but not a boat
- c) neither a motorcycle nor a boat

3) Twenty-four dogs are in a kennel. Twelve of the dogs are black, six of the dogs have short tails, and fifteen of the dogs have long hair. There is only one dog that is black with a short tail and long hair. Two of the dogs are black with short tails and do not have long hair. Two of the dogs have short tails and long hair but are not black. If all of the dogs in the kennel have at least one of the mentioned characteristics, *how many* dogs are black with long hair but do not have short tails?

4) I spent Spring Semester 2004 teaching at MJC's sister college up the hill in Columbia. A student there who was taking statistics did what I thought was a pretty interesting survey. She decided to survey other girls about what guys they would be willing to date based on what games the guys do (or do not) play.

Here are the findings:

Of 100 girls surveyed 75 said they would date guys who played chess, 11 said they would date guys who played Pokémon, and 6 girls said they would date guys who played Dungeons & Dragons. Twenty-two girls would not date guys who played any of these games. Three girls would date guys who played all three. Eight girls would date guys who played Pokémon and chess. Sixty-five of the girls said they would date guys who played only chess but neither of the other games.

Here are your questions:

- a) How many girls would date guys who played only Dungeons & Dragons?
- b) How many girls would date guys who played Pokémon and Dungeons & Dragons?

5) A local game store did a survey recently about the games people like to play. Fifty people took part in the survey. It was found that 26 people liked to play Monopoly, 18 people liked to play Poker, and 25 people liked to play Checkers. There were 2 people who didn't like to play any of these games, and there were 3 people who liked to play all of them. Forty people liked Monopoly or Poker; 36 people liked Checkers or Monopoly, and 38 people liked Poker or Checkers.

- a) How many people liked to play only Checkers and none of the other games?
- b) What percentage of the people like to play only one of the games?
- c) How many people liked to play Poker and Checkers but not Monopoly?