Lab 1 (Probability)

- Among a group of people, 40% liked red, 30% liked blue and 30% liked green. 7% liked both red and green, 5% liked both red and blue, 10% liked both green and blue. If 86% of them liked at least one colour, what percentage of people liked all three?

- Suppose we draw 2 cards out of a deck of 52. What is the probability that both cards are spades?

- The Cornell hockey team is playing in a four-team tournament. In the first round they have any easy opponent that they will beat 80% of the time but if they win that game they will play against a tougher team where their probability of success is 0.4.What is the probability that they will win the tournament?

- In the town of Mythica 90% of students graduate high school, 60% of high school graduates complete college, and 20% of college graduates get graduate or professional degrees. What fraction of students get advanced degrees?

- An urn contains 5 red and 10 black balls. We draw 2 balls from the urn without replacement. What is the probability that the second ball drawn is red?

- 70% of students in a certain course pass the midterm exam. The final exam is passed by 80% of those who passed the midterm, but only by 40% of those who fail the midterm. What fraction of students pass the final?