

Table Probabilities

150 students at the College of the Sequoias were asked their preference of burgers. Their responses were categorized as Burger King, McDonald's, In-N-Out and Wendy's. Here are the results.

| | Burger King | McDonald's | In-N-Out | Wendy's |
|--------|-------------|------------|----------|---------|
| Male | 15 | 18 | 35 | 15 |
| Female | 35 | 12 | 10 | 10 |

- 1) Find the probability that a student is female.
- 2) Find the probability that a student is male or prefers McDonald's.
- 3) Find the probability that a student is female and prefers Wendy's.
- 4) Find the probability that a student is male given that the student prefers McDonald's.
- 5) Find the probability that a student prefers Wendy's given that the student is female.

Conditional Probability

- 6) 35% of Best Buy customers buy a computer, 25% buy a warranty, and 5% buy a computer and a warranty. Find the probability that a Best Buy customer buys a computer given that the customer bought a warranty.
- 7) 30% of SPCA visitors adopt a dog, 45% adopt a cat, and 15% adopt both a dog and a cat. Find the probability that a visitor adopts a cat given that they adopt a dog.

Card Problems

- 8) Three cards are drawn from a standard 52-card deck. Find the probability they are all Jacks.
- 9) Two cards are drawn from a standard 52-card deck. Find the probability they are both Face Cards.

Multiplication and "At Least 1"

- 10) An elementary school class has 14 girls and 11 boys. If the teacher randomly picks a new helper for the next 3 days, find the probability that all 3 students are girls.
- 11) A bag of flower bulbs contains 20 tulips and 10 lilies. If 4 bulbs are selected randomly, find the probability that at least 1 is a lily.