Alg 2
Probability

Basic Probability Review

Probability: likelihood of an event happening; a # from 0 to 1

Theoretical Probability of an Event E

$$P(E) = \frac{\text{\# of ways Event E can occur}}{\text{total \# of possible outcomes}}$$

* Written as original fraction, reduce it possible, then decimal to hundredths place.

Practice 1-6

1. You select a number at random from the sample space {1, 2, 3, 4, 5}.
   Find each theoretical probability.

   a. P(the number is 2)   b. P(the number is even)

   c. P(the number is prime)   d. P(the number is less than 5)

2. In a class of 19 students, 10 study Spanish, 7 study French, and 2 study
   both French and Spanish. One student is picked at random. Find each
   probability.

   a. P(studying Spanish but not French)   b. P(studying neither Spanish nor French)

   c. P(studying both Spanish and French)   d. P(studying French)

3. In a telephone survey of 150 households, 75 respondents answered
   "Yes" to a particular question, 50 answered "No," and 25 were "Not
   sure." Find each experimental probability.

   a. P(answer was "Yes")   b. P(answer was "No")

   c. P(answer was "Not sure")   d. P(answer was not "Not sure")

4. A wallet contains four bills with denominations of $1, $5, $10, and $20.
   You choose two of the four bills from the wallet at random and add the
   dollar amounts.

   a. What is the sample space? How many outcomes are there?

   b. What is the probability of getting $15?

   c. What is the probability of getting $50?

   d. What is the probability of getting at least $25?

5. A basketball player has attempted 24 shots and made 13. Find the
   experimental probability that the player will make the next shot that
   she attempts.

6. A baseball player attempted to steal a base 70 times and was successful
   47 times. Find the experimental probability that the player will be
   successful on his next attempt to steal a base.