

## Probability

- A box contains 3 baseballs, 7 softballs and 11 tennis balls.
  - What is the probability that a ball selected at random will be:
    - a tennis ball?,      b) a baseball?,      c) a softball?
  - If two balls are selected at random, what would be the probability that:
    - the first is a softball and the second a tennis ball?
    - the first is a softball and the second is a baseball?
    - that both balls are tennis balls?
    - that a softball and baseball are drawn?
- Two cards are drawn at random from a standard deck of 52 cards. What is the probability that:
  - both are hearts?
  - both are tens?
  - both are black?
  - the first card is a two and the second a five?
  - the first is a prime number and the second a face card?
  - the first card is between two and six and the second is between seven and nine inclusively?
- A collection of 15 transistors contains 3 that are defective. If 2 transistors are selected at random, what is the probability that:
  - both are good?
  - both are defective?
  - that at least one is defective?
- A number is picked at random from the integers 1 through 50. Find the probability of each of the following:
  - an odd integer?
  - an integer divisible by 5?
  - a multiple of four?
  - a perfect square?
  - a prime number?
  - a number between 1 and 50, inclusively?
  - the number 60
- A new phone is being installed. Find the probability that the final three digits in the telephone number will be even?
- Fifty tickets, numbered consecutively from 1 to 50 are placed in a box. What is the probability that in 4 separate drawings, the following selections will occur?
  - 4 odd numbers, if replacement occurs
  - 4 odd numbers, if no replacement occurs
  - 4 prime number
  - 4 even numbers

