Combinations (Part 2)

These notes are intended as a supplement to section 8.4 in your workbook.

Problems Involving Poker Hands

Example
Find the number of 5 card poker hands possible from a standard 52 card deck.

Example
Find the number of 5 card poker hands that contain no clubs.

Example
Find the number of 5 card poker hands that contain at least one club.

Example
Find the number of 5 card poker hands that contain 1 pair and 3 single cards.

Example
Find the number of 5 card poker hands that contain 2 pairs and 1 single card.

Example
Find the number of 5 card hands that contain 3 of a kind and 2 single cards.

Example
Find the number of 5 card poker hands that contain a full house (3 of one kind plus a pair of another kind).

Example
Find the number of 5 card hands that contain 4 of a kind and 1 single card.

Note: The probability of getting any particular type of hand is given by:

$$P = \frac{desired\ hand}{total\ hands} \times 100\%$$

For example, the probability of getting 4 of a kind would be:

$$P = \frac{624}{2598960} \times 100\% = 0.24\%$$