Day 7: Perms, Combs and Probabilities

Permutation: An arrangement of items in which order is important. **Combination:** A selection of items in which order is not important.

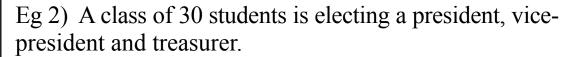
Eg 1) A five card hand is dealt using a deck of 52 cards. What is the probability of each event?

a. All five cards are diamonds.

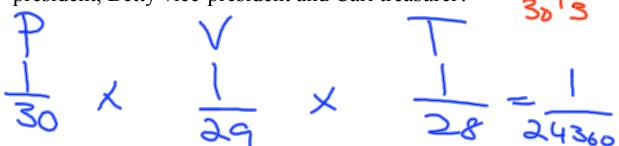
b. There are exactly 4 diamonds in the hand.

$$13^{4} \times 39^{C_{1}} = 0.010729$$
 $52^{C_{5}}$

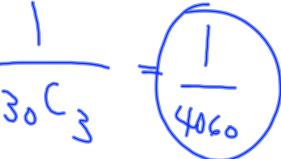
c. There are exactly 3 diamonds in the hand.



a. What is the probability that Ann is elected president, Betty vice-president and Carl treasurer?



b. What is the probability that Ann, Betty and Carl are elected to the three positions but not necessarily in that order?



Assignment Pg. 444 1, 3, 4, 8, 9, 11, 13, 18, 21