Lecture 34:

How many possible 5 card poker hands are there?
Notes and Clarifications

- No Office Hours Today/Tomorrow
- Reminder: Quiz due tomorrow
- Schedule for Monday
Lesson 34

- **TWO PAIR**

- This hand has the pattern AABBC where A, B, and C are from distinct ranks.
Lesson 34

- **TRIPPLE**

This hand has the pattern AAABC where A, B, and C are from distinct ranks.
1. For the following poker hands, give a) the number of possible hands and b) the probability
   
a) Full House: This hand has the pattern AAABB where A and B are from distinct ranks.
   
b) 4 of a kind: This hand has the pattern AAAAB where A and B are from distinct ranks.
   
c) Straight: This is five cards in a sequence (e.g., 4,5,6,7,8), with aces allowed to be either 1 or 13 (low or high) and with the cards allowed to be of the same suit (e.g., all hearts) or from some different suits.

2. In a straight flush, all 5 cards are from the same suit and they form a straight, a royal flush consists of the ten, jack, queen, king, and ace of one suit. What is the probability it is a straight flush OR a royal flush?
   
a) hint: is there overlap between the two? The principle of inclusion – exclusion may be helpful here.

3. Extra credit: What is the probability it is not a single pair, two pair, triple, Full House, 4 of a kind, Straight, Straight Flush, Royal Flush?