ORCA 2500, HW 4.

1. Suppose you flip n fair coins What is the probability of getting exactly i heads, for each i. What is

the probability of getting at least i heads for each i?

Solution:

1. The probability of getting exactly i heads for each i.
2. The probability of getting at least i heads for each i.

2. What is the probability of an odd sum when you roll three dice.

Solution:

3. Suppose that each of 9 people are dealt 4 cards. What is the probability that one of the people has 2

or more kings. (I recently lost a poker hand where the only way I could have lost was if someone had

2 or more kings. I had been pretty sure I was going to win).

Solution:

4. Which event is more likely:

(a) drawing an ace and a king, when you draw 2 cards from a 52 card deck.

(b) drawing an ace and a king, when you draw 2 cards from a 13 card deck consisting of only hearts.

Please explain with calculations.

Solution:

Since

Therefore, event (b) is more likely.