

**Math 107 Quiz #9**  
**March 8, 2011**

Name: \_\_\_\_\_

Show all work and answers on a separate paper. Staple this sheet to your answers.

1. (2 pts.) What is the probability that if you flip 5 fair coins, that you will get at least one heads?
2. (3 pts.) Suppose in a club with 30 people, a president, vice president, and a treasurer is selected. How many different ways can the club members occupy the 3 positions?
3. (3 pts.) Suppose there are 10 different side dishes to choose from in a restaurant. If each meal comes with 3 sides (no repetition), how many different 3-side possibilities are there?
4. (3 pts.) How many different 5-character passwords can be formed from the numbers 0-9, lowercase letters, and uppercase letters?
5. (4 pts.) Suppose a small size lottery consists of drawing 4 balls that are numbered from 1-20 (without replacement). What is the probability of winning the jackpot if you need to match all 4 numbers to win the jackpot?

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