First name: _____ Last name: _____   Student ID: _____

Statistics and Probability Homework

Basic problems:

1. Find the range, mean, median, and mode of following set of data.

> 168, 149, 27, 44, 11, 98, 44, 138, 74, 149, 44, and 110

2. Find the probability. Write your answer as a fraction in simplest form.

1. You roll a number cube numbered from 1 to 6. P(a number greater than 4).	2. A jar contains 25 orange, 16 white, and 4 violet marbles. A marble is drawn at random. P(not orange).

3. Find the probability. Assume that the spinner is separated into equal sections.

1. You roll a number cube numbered from 1 to 6. You then spin a spinner with 7 sections each with a different color. The spinner has the colors green, brown, blue, violet, navy, white, and red. P(3 and brown)	2. You roll a cube which has the numbers 11, 13, 14, 16, 17, and 20 on it. You then spin a spinner which has 4 sections. The letters on the spinner are H, J, E, and B. P(a number divisible by 2 and H)
3. You flip a coin and toss a 1-6 number cube. P(not heads and not 1)	4. You roll a cube which has the numbers 1, 3, 6, 9, 3, and 9 on it. You then spin a spinner which has 8 sections. The letters on the spinner are E, G, A, K, K, G, A, and H. P(not a 6 and not E)

Word problems

1. Four fair coins are tossed. Find the probability that at least one of them lands "heads."

2. If 10 people are seated around a circular table, what is the probability that a particular pair of people are seated next to each other?

3. Twenty marbles are in a bag. There are 5 green marbles, 9 blue marbles, and the rest are red. Two marbles are drawn at random without replacement. Find the probability that neither is blue.

4. Assume that 3 dice are thrown simultaneously. What is the probability that exactly one 4 will come up?

5. What is the probability of flipping a coin and getting heads 5 times in a row?

6. A coin is loaded in such a way that a tail is three times as likely to occur as a head. If the coin is flipped twice find the probability that two heads occur.

7. One box contains eight green and three yellow balls. Another box contains twelve yellow balls. If a ball is drawn out at random and found to be yellow, what is the probability it was drawn from box two?

8. You repeatedly toss a fair coin for 5 times. What is the probability that heads comes up at least 3 times before tails comes up twice?

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9. Emory tosses a nickel four times. The probability that he gets at least as many heads as tails is:

10. Kelly has twelve cards numbered 1 to 12. What is the probability of picking three even-numbered cards consecutively, if the first two cards she picks are not replaced?

11. A nationwide survey found that 72% of people in the United States like pizza. If 3 people are selected at random, what is the probability that all three like pizza?