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

Statistic and Probability Homework

Basic problems:

1. Find the Mean, Median, Mode and Range for each set of data.

1) 81, 125, 173, 135, 42, 149, 72, 67, 171, and 165

Mean	Median
Mode	Range

2) 114, 191, 165, 79, 175, 56, 147, 46, and 62

Mean	Median
Mode	Range

2. Find *n*.

1. 3, 10, *n*, 11, 8, 4, and 3 mean = 6 mode = 3	2. 11, 11, *n*, 13, 11, and 13 range = 2 median = 12
3. 16, 9, 19, *n*, and 8 range = 16 median = 9	4. 10, 26, 19, 2, *n*, and 23 mean = 14 mode = none

5. 13, 14, *n*, 3, and 2 range = 16 mean = 10	6. 11, 10, 10, 12, 9, 16, and *n* mean = 12 median = 11

3. Finding the Mean, Median or Mode

1) The test results on a recent exam were: 67, 62, 70, 68, 90, 84, 94 and 98. What is the median test score?

2) For this set of data: 5, 5, 6, 7, 7. Which statement is true?
A. mean = mode B. median = mode C. mean = median D. mean < median

3) If the heights of a group of students are 180 cm, 173 cm, 170 cm, 185 cm and 162 cm, what is the mean height for this group?

4) Mary has received the following grades on her first 4 Math tests: 87, 93, 91 and 88. What grade must she receive on her 5th test to have an average of 90 in the class?

5) For which set of data will the mean, the median and the mode all be equal?
A. 1,2,5,5,7 B. 1,1,1,2,5 C. 1,2,5,5,8,9 D. 1,1,1,2

4. Complete following questions

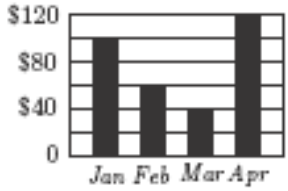
1) A bag contains 7 red marbles, 9 blue marbles and 8 green marbles. What is the probability of reaching into the bag (one time) and pulling out a blue one?

2) A single die is rolled one time. What is the probability of rolling a "prime" number?

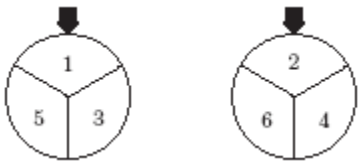
3) A piggy bank contains 10 nickels, 22 dimes, 13 quarters and 5 half-dollars. If you shake the bank until a single coin drops out, what is the probability that the coin is worth at least 10 cents?

5. Challenge problems

1. Candy sales of the Boosters Club for January through April are shown. What were the average sales per month in dollars?



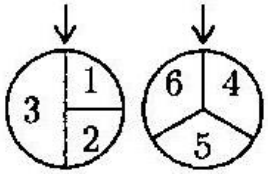
2. The two spinners shown are spun once and each lands on one of the numbered sectors. What is the probability that the sum of the numbers in the two sectors is prime?



3. Two cards are dealt from a deck of four red cards labeled A, B, C, D and four green cards labeled A, B, C, D. A winning pair is two of the same color or two of the same letter. What is the probability of drawing a winning pair?

4. A bag contains four pieces of paper, each labelled with one of the digits 1, 2, 3, or 4, with no repeats. Three of these pieces are drawn, one at a time without replacement, to construct a three-digit number. What is the probability that the three-digit number is a multiple 3?

5. The two wheels shown at the right are spun and the two resulting numbers are added. What is the probability that the sum of the two numbers is even?



6. Assume the adjoining chart shows the 1980 U.S. population, in millions, for each region by ethnic group. To the nearest percent, what percent of the U.S. Black population lived in the South?

	NE	MW	South	West
White	42	52	57	35
Black	5	5	15	2
Asian	1	1	1	3
Other	1	1	2	4

7. Ten balls numbered 1 to 10 are in a jar. Jack reaches into the jar and randomly removes one of the balls. Then Jill reaches into the jar and randomly removes a different ball. What is the probability that the sum of the two numbers on the balls removed is even?

8. Which of the following sets of whole numbers has the largest average?

A) Multiples of 2 between 1 and 101
B) Multiples of 3 between 1 and 101
C) Multiples of 4 between 1 and 101
D) Multiples of 5 between 1 and 101
E) Multiples of 6 between 1 and 101

9. The 600 students at King Middle School are divided into three groups of equal size for lunch. Each group has lunch at a different time. A computer randomly assigns each student to one of the three lunch groups. What is the probability that three friends, Al, Bob, and Carol, will be assigned to the same lunch group?

10. The graph shows the distribution of the number of children in the families of the students in Ms. Jordan's English class. What is the median number of children in the family for this distribution?