WebTest Name: week6(AnsKey)

1. A box contains 54 red marbles, 9 white marbles, and 75 blue marbles. If a marble is randomly selected from the box, what is the probability that it is red or blue? Express your answer as a fraction or a decimal number rounded to four decimal places.

Answer: 0.9348

2. You are going to play mini golf. A ball machine that contains 19 green golf balls, 20 red golf balls, 24 blue golf balls, and 17 yellow golf balls, randomly gives you your ball. What is the probability that you end up with a red golf ball? Express your answer as a simplified fraction or a decimal rounded to four decimal places.

Answer: 0.2500

3. A pizza delivery company classifies its customers by gender and location of residence. The research department has gathered data from a random sample of 1399 customers. The data is summarized in the table below.

Gender and Residence of Customers		
	Males	**Females**
Apartment	81	228
Dorm	116	79
With Parent(s)	215	252
Sorority/Fraternity House	130	97
Other	129	72

What is the probability that a customer is not male or does not live with parents? Write your answer as a fraction or a decimal number rounded to four decimal places.

Answer: $\frac{1184}{1399}$

4. Determine if the following events are independent.

Going to the gym. Losing weight.

Answer: **A) Dependent** B) Independent

5. A veggie wrap at City Subs is composed of 3 different vegetables and 3 different condiments wrapped up in a tortilla. If there are 8 vegetables, 7 condiments, and 3 types of tortilla available, how many different veggie wraps can be made?

Answer: 5880

6. Determine if the following events are independent.

Jeff runs out of gas on the way to work. Liz watches the evening news.

Answer: A) Dependent **B) Independent**

7. The newly elected president needs to decide the remaining 8 spots available in the cabinet he/she is appointing. If there are 14 eligible candidates for these positions (where rank matters), how many different ways can the members of the cabinet be appointed?

Answer: 121080960

8. A bag contains 9 red, 4 orange, and 9 green jellybeans. What is the probability of reaching into the bag and randomly withdrawing 4 jellybeans such that the number of red ones is 0, the number of orange ones is 1, and the number of green ones is 3? Write your answer as a fraction or a decimal number rounded to four decimal places.

Answer: 0.0459

9. Evaluate the following expression.

$$\frac{11!}{7!}$$

Answer: 7920

10. Describe the complement of the given event.

67% of subscribers to a fitness magazine are over the age of 34.

Answer: The 33 % of subscribers who are not over the age of 34.

11. If you throw exactly three heads in four tosses of a coin you win $97. If not, you pay me $30.
Step 1. Find the expected value of the proposition. Round your answer to two decimal places.

Answer: $ 1.75

Step 2. If you played this game 559 times how much would you expect to win or lose? (Losses must be entered as negative.)

Answer: $ 978.25

12. Flip a coin 9 times. If you get 4 tails or less, I will pay you $23. Otherwise you pay me $26.
Step 1. Find the expected value of the proposition. Round your answer to two decimal places.

Answer: $ −1.50

Step 2. If you played this game 994 times how much would you expect to win or lose? (Losses must be entered as negative.)

Answer: $ −1491.00