Name_____ Date_____

Unit 6 – Study Guide

Complete this study guide with the assistance of your notes and book.

A bag is filled with 4 red marbles, 3 blue marbles, 3 yellow marbles, and 2 green marbles. You randomly choose one marble from the bag. Find the **number of ways** the event can occur.

1) Choosing red

2) Choosing yellow

3) Choosing not blue

4) Complete the formula for probability: $P(event) =$ _____

You randomly choose one hat from 3 green hats, 4 black hats, 2 white hats, 2 red hats, and 1 blue hat. Find the probability of the event. Find the probability of the event.

5) Choosing a red hat

6) *Not* choosing a white hat

7) Choosing a black hat

8) Complete the formula: $Relative\ Frequency =$ _____

9) Complete the formula: $Experimental\ Probability =$ _____

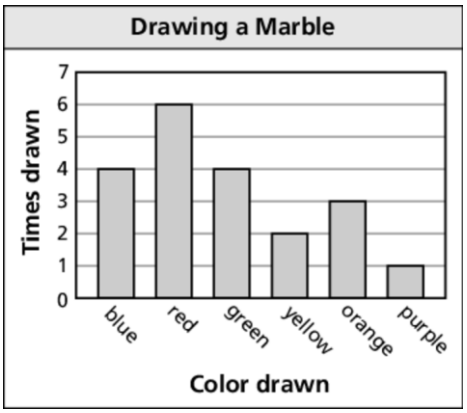
Use the bar graph to find the experimental probability of the event.

10) Drawing red

11) Drawing orange

12) Drawing *not* yellow

13) Drawing a color with more than 4 letters in its name



Use the Fundamental Counting Principle to find the total number of possible outcomes. SHOW WORK.

14)

Photos	
Size	Wallet, 4 by 6, 5 by 7, 8 by 10, 11 by 14, 16 by 20
Finish	Matte, Glossy
Edits	Red eye, Black and white, Crop

15)

Laptops	
Hard Drive	250 GB, 320 GB, 500 GB
Style	HD, LCD
Color	Black, White, Red, Blue, Pink, Green, Purple

16) There are 64 cookies in a jar. The probability of randomly choosing an oatmeal cookie from the jar is 25%. How many of the cookies are *not* oatmeal cookies?

17) You roll a number cube and flip a coin. Find the probability of rolling a 3 and flipping tails.

For # 18 and 19, determine whether the sample is biased or unbiased. Explain.

18) You want to estimate the number of students in your grade who choose math as their favorite subject. You survey 10 of your close friends.

Why?

19) You want to estimate the number of people in a town in favor of a proposed curfew law. You survey every fifth person who enters a post office.

Why?

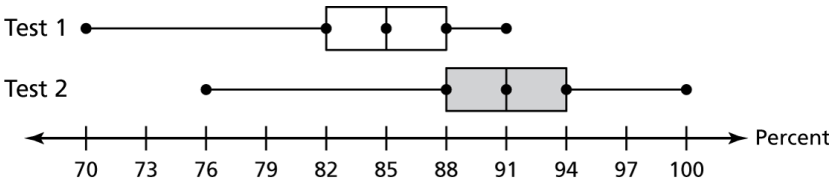
20) Which sample is better for making a prediction? Explain.

Predict the percentage of English-speaking people in the world	
Sample A	A random sample of 100,000 people from the U.S.
Sample B	A random sample of 100,000 people all across the world

21) You want to know how the residents of your town feel about a Laundromat going out of business. You survey 100 people who enter the Laundromat. Ninety are disappointed about the closing, and ten are not. So, you conclude that 90% of the residents of your town are disappointed about the Laundromat going out of business. Determine whether the conclusion is valid. Explain.

22) Of the 40 randomly chosen students surveyed, 27 are involved in extracurricular activities at school. There are 680 students in the school. Predict the number of students in the school who are involved in extracurricular activities.

23) The double box-and-whisker plot shows the scores of two tests.



a) List the following for Test 1:

Least: _____

Q1: _____

Median: _____

Q3: _____

Greatest: _____

b) Find the interquartile range of the students in Test 2.