Mock Exam 1

- 1. In order to determine the percentage of Americans who have fumbled the bag, 700 Americans were randomly selected and polled. Of those polled, 252 have fumbled the bag.
- A) What is the population?
- B) What is the sample?
- C) What is the population data?

D) What is the sample data?

E) What is the population parameter?

F) What is the sample statistic?

G) What is your best estimate of the population parameter?

2. Data: 4 10 23 6 8 1 1 14 22 36

From this data, find the

A) Mean B) Median C) Mode

D) Midrange

E) Range

F) Standard Deviation

Suppose you have 2 data sets.

Data Set 1: 321 322 325 326 329

Data Set 2: 1 54 89 232 1,246

Let s1 be the standard deviation of data set 1 and let s2 be the standard deviation of data set 2. Which one is larger, s1 or s2? Explain (Do not calculate)

3. Look at this deck of standard cards, there are 52 cards in total. Suppose you draw 1 card from the deck.

A ♣ ♣	2 *	*		3 4	* *		4 ♣ ♣	*	5 . ♣	* *	6 **	* *	7. *	**	8 * *	* * *	9 ** * ***		J * · · ·		K.
*		÷	÷		Ť	*	Ť	**	Ť	**	*	*	*	** <u>*</u>	*	*8	* *	÷***			**
¢ •	2	*	5	3	* *	•	4 ♥	•	5. •	* • • • •	€.♥ ♥	¥ ¥ \$	7. •	•	8 • •	****					
≜ •	2	* *	÷z	3	* * *	÷	4 ♠ ♠	♠ ♥₽	5 ♠ ♥	♠ ▶ ♥\$	6 ♠ ♥	♠ ♠ ♥°g	7 * *	****	8 * * * *	* * * * *	9 * * * * * * * * *				K A K A
^ ● ♥	2	•	•2	3	* * *	•	4.*	* +;	5 • •	• • • •	6 • •	۰ ۰ ۰	₹• •	•	8	8	9			•	× •

Let J be the Event that you dra Let Q be the Event that you dra Let K be the event that you dra	w a Jack aw a Queen aw a King
B) Q	C) K

D) J u Q E) J n K F) P(S)

G) P(K) H) P(K u Q)

Find

A) J

Are the events K and J Disjoint? Why or why not?

Are the events J and Q independent? Why or why not?

4. Imagine a container with 10 balls labeled 1-10. (Room provided if you would like to illustrate that)

A) If you draw 2 balls from the container <u>with replacement</u>, what is the probability that both have numbers on them that are bigger than 6?

B) If you draw 2 balls from the container <u>without replacement</u>, what is the probability that both have numbers on them bigger than 6?

C) If you draw 2 balls from the container <u>without replacement</u>, what is the probability that neither have numbers on them that are bigger than 6?

D) If you draw 2 balls from the container <u>without replacement</u>, what is the probability that at least one has a number on it bigger than 6?

5. Consider the experiment where you play a single game of roulette. Let B be the event that it lands on black.

Find P(B) and then write your answer as a percentage.

What does your answer above mean?

If you were to repeat this experiment a total of 100,000 times, how many times will the ball land on black?

If you were to repeat this experiment infinitely many times, what percentage of the time will the ball land on black?