

Name: _____ Date: _____

Mid Module 5 Study Guide

SHOW ALL WORK

Round all decimal answers to the nearest hundredth.

1. Each student in a class of 26 students was asked how many states they have traveled to (besides the state they live in). The data is summarized in the table below.

Number of States	0	1	2	3	4	5
Count	1	2	8	10	1	4

- a. Based on the data, estimate the probability that a randomly selected student from this class has traveled to at least 3 other states.
- b. Based on the data, estimate the probability that a randomly selected student from this class has traveled to fewer than 3 other states.
2. A student studying probability wants to predict the probability of a household in your city, City A, subscribing to Komcart tv service. Records from another city, City B, indicate that 317 out of 800 households subscribe to this service provider.
- a. Assuming the probability of a household subscribing to Komcart tv service is similar for the two cities, estimate the probability that a randomly selected household from City A subscribes to this service.

Suppose the cable tv company sells three different packages to its customers:

- Basic
- Limited
- Deluxe

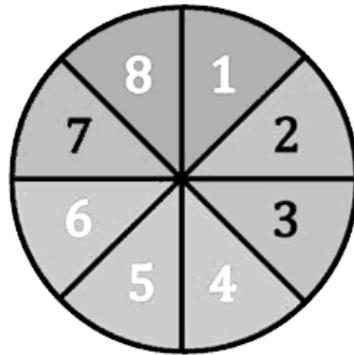
Consider the chance experiment of selecting a household at random and recording which package they have purchased.

Name: _____ Date: _____

- b. What outcomes are in the sample space for this chance experiment?
- c. The company wants to assign probabilities to these three packages. Explain what is wrong with each of the following probability assignments.
- Case 1:** The probability of the Basic package is 0.6, the probability of the Limited is 0.3 and the probability of the Deluxe package is 0.2.

Case 2: The probability of pay-as-you-go is 0.6, the probability of the Limited package is 0.7 and the probability of the Deluxe package is -0.3.

3. Students are playing a game in which they must spin a spinner (below) to determine how many spaces they may advance.



- a. If you are equally likely to land in any section, what is the probability that you land on 7?
- b. If you are equally likely to land in any section, what is the probability that you will land on a 2, 4, or 6?