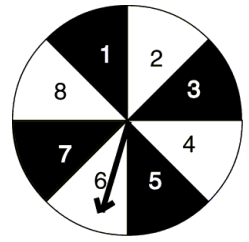


Homework – Day 6



1. Explain how you could use the **spinner** at the right to simulate whether a person picks a spade from a deck of 52 cards.

2. Given the following simulation, answer the questions that follow. **Situation:** Each package of Gooley Gum contains a mystery flavor piece of gum in it. Each of the 6 mystery flavors is equally likely. You purchase 8 packages of Gooley Gum. Find the probability that you get at least 5 different mystery flavors.

Trial Outcomes

| Trial | Flavors in the Package | | | | | | | |
|-------|------------------------|---|---|---|---|---|---|---|
| 1 | 6 | 6 | 1 | 5 | 1 | 6 | 6 | 4 |
| 2 | 1 | 6 | 2 | 4 | 4 | 2 | 6 | 5 |
| 3 | 5 | 6 | 3 | 1 | 1 | 6 | 2 | 1 |
| 4 | 6 | 2 | 1 | 2 | 3 | 3 | 2 | 6 |
| 5 | 3 | 5 | 4 | 4 | 3 | 4 | 2 | 4 |
| 6 | 5 | 6 | 1 | 1 | 5 | 1 | 1 | 3 |
| 7 | 2 | 4 | 4 | 6 | 5 | 6 | 2 | 6 |
| 8 | 3 | 2 | 5 | 4 | 3 | 3 | 1 | 2 |
| 9 | 1 | 4 | 6 | 4 | 4 | 4 | 2 | 3 |
| 10 | 4 | 4 | 1 | 2 | 4 | 5 | 3 | 6 |

a. Based on the trials, what do you think they used to simulate the situation?

b. What does each number represent?

c. Why did they look at 8 single digits at a time?

d. Complete the frequency table below based on the trials provided.

| Number of Different Mystery Flavors | Frequency |
|-------------------------------------|-----------|
| 3 | |
| 4 | |
| 5 | |
| 6 | |

e. Based on the results in your table, what is the probability that you will get exactly 5 different types of mystery gum?

f. Based on the results in your table, what is the probability that you will get at least 5 different types of mystery gum?

Answers:

1. The spinner would need four equal sections. Designate one section to represent spades and the remaining three sections will represent the remaining three suits. Each time you spin, it will simulate choosing one card.

5a. They used random digits either in a table or the generator on the calculator.

b. Each number represents a different mystery flavor.

c. They are simulating the purchase of eight packages of gum.

d.

| Number of Different Mystery Flavors | Frequency |
|-------------------------------------|-----------|
| 3 | 0 |
| 4 | 5 |
| 5 | 4 |
| 6 | 1 |

e. $4/10 = 0.4$

f. $5/10 = 0.5$