Concept: Introduction to Probability

Name:

COMPUTER COMPONENT

Instructions: In **UMATH X** follow the **Content Menu** path:

Probability > Introduction to Probability

Work through all Sub Lessons of the following Lessons **in order**:
- *The Language of Chance*
- *Impossible to Certain*
- *Probability Lines*
- *Possible Outcomes*
- *Experiments with Spinners*
- *The Spinner Game*
- *It's in the Bag*
- *Tree Diagrams*
- *Problem Solving- Logic vs. Probability*

As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

SUMMARY

1. Before we learn about the _____of something happening, we must determine what is _____.

What are the possible outcomes when you toss a coin? _____ _____.

The 'Set' of possible outcomes is called _____ _____.

2. An optometrist gives you an eye examination sheet. 'Check' the possible ways you can answer her questions.

1. T☐ F☐	1. T☐ F☐	1. T☐ F☐	1. T☐ F☐
2. T☐ F☐	2. T☐ F☐	2. T☐ F☐	2. T☐ F☐

List the possibilities_____

3. A tourist wishes to travel from Kauai to Lanai to Maui to Hawaii. List all the possible ways he can do this.

___ ___ ___   ___ ___ ___

___ ___ ___   ___ ___ ___

___ ___ ___   ___ ___ ___

4. *Spinners have always been an excellent tool to illustrate chance.*

   Use the space below to record your 'predictions and results' for the 6 experiments in the 'Experiments with Spinners' Lesson.

Experiment 1

When I spin Spinner A 20 times, I PREDICT that I will spin RED _____ time(s).

When I spin Spinner B 20 times, I PREDICT that I will spin RED _____ time(s).

Tally Chart – Spinner A

Red	
Blue	
Green	
Yellow	

Tally Chart- Spinner B

Red	
Green	

Compare your predictions with the actual results. Are the numbers similar or different? Why?

_____

_____

_____

Experiment 2
When I spin Spinner C 18 times, I PREDICT that I will spin RED _____ time(s).

Tally Chart – Spinner C

Red	
Blue	
Green	

Compare your prediction with the actual result. Are the numbers similar or different? Why?

Red came up _____ of the time.

        18

_____

_____

_____

Experiment 3

When I spin Spinner D 20 times, I PREDICT that I will spin C _____ time(s).

Tally Chart – Spinner D

A	
B	
C	
D	
E	

Compare your prediction with the actual result. Are the numbers similar or different? Why?

C came up _____ of the time.

       20

_____

_____

_____

Experiment 4

When I spin Spinner E 20 times, I PREDICT that I will spin an EVEN NUMBER _____ time(s).

Neufeld Learning
Systems Inc

Tally Chart – Spinner E

Even	
Odd	

Compare your prediction with the actual result. Are the numbers similar or different? Why?

Even came up _____ of the time.

      20

_____

_____

_____

Experiment 5

When I spin Spinner F 20 times, I PREDICT that I will spin RED _____ time(s) and GREEN _____ time(s).

Tally Chart – Spinner F

Red	
Blue	
Green	

Compare your prediction with the actual result. Are the numbers similar or different? Why?

Red came up _____ of the time.   Green came up _____ of the time

    20   20

_____

_____

_____

<u>Experiment 6</u>

When I spin Spinner G 24 times, I PREDICT that I will spin BLUE _____ time(s).

Tally Chart – Spinner G

Red	
Blue	
Yellow	

Compare your prediction with the actual result. Are the numbers similar or different? Why?

Blue came up _____ of the time.
            24

_____

_____

_____

OFF COMPUTER EXERCISES

1. Use the following terms to classify the probability of each event below.

Impossible	Unlikely	Possible
Likely	Equally Likely	Certain

- You will have a conversation with someone today.   _____

- The sun will set tonight.   _____

- You will flip "Heads" on a coin.   _____

- A cat will fly by itself.   _____

- You will watch a movie tonight.   _____

- You will read a whole novel in 1 hour.   _____

2. Describe probable events below.

(a) Describe 2 events that are certain to happen this week.

_____

_____

(b) Describe 2 events that would be impossible this week.

_____

_____

(c) Describe 2 events that could possibly happen this week.

_____

_____

3. Use the probability words you learned on the computer. Rank these events in order of their probability.

_____Today will end at midnight.

_____I will eat lunch today.

_____I will go to the movie theater this week.

_____My teacher will not teach the class on Tuesday.

_____It will snow in Honolulu tomorrow.

4. I heard a game show host say that something had an "equally likely" chance of happening. What might he have been talking about?

_____

_____

Neufeld Learning
Systems Inc

UMATH X

Tree diagrams are an excellent way to record and count all combinations of events.

5. At a restaurant, you can choose from: 3 different drinks   (Soda, Juice or Water) and 2 dinners   (Hamburger, Spaghetti).

Make a tree diagram in the space below to list all possible meal combinations.

How many possible combinations are there? _____

(b) A traditional triathlon is a 3-event race: swim, ride and run.

 As today's race starts and finishes in the same place, organizers have proposed allowing participants to select the order they would like to tackle each event.

Make a tree diagram to list all the possible ways to race.

How many possible combinations are there? _____