



Alberta Math Education Curriculum Component: Unit- **STATISTICS AND PROBABILITY (Chance and Uncertainty)** Chapter 10: Probability

General Outcome:

➔ Use experimental or theoretical probabilities to represent and solve problems involving uncertainty.

Students will able to:

- identify the possible outcomes in a probability experiment
- determine the theoretical probability of an outcome or event in a probability experiment
- compare experimental and theoretical probabilities

Alberta Math Education Specific Concept (learning outcome): 4.

Classroom assessment is generally divided into three types: assessment *for* learning (Diagnostic Assessment: D), assessment *of* learning (Summative Assessment: S), assessment *as* learning (F).

➔ For lesson **extra practice**, please visit:

<http://www.nelson.com/mathfocus/grade6/student/tryout.html>

Lesson Outline:

Lesson	Textbook Lesson Title	Learning Goals	Task **	Done
1	10.2-Theoretical Probability	Determine theoretical probabilities of outcomes and events.	Scaffolding for Getting Started (D) <input type="checkbox"/> HW: Workbook (pg. 79) (F)	
2	10.3-Comparing Experimental and Theoretical	Compare predicted and actual results of a probability experiment. ➔ Materials: a die, a coin, linking cubes and a paper bag	<input type="checkbox"/> HW: Workbook (pg. 80) (F) <input checked="" type="checkbox"/> On line: Extra Practice	
3	Chapter Review	Preparation for the test: Test Date: __ / __ / __ (mm/dd/yyyy)	<input type="checkbox"/> Textbook: (F) ➔ Pg. 343 - 344 (Q3 - Q5) ➔ Workbook (pg. 82) <input type="checkbox"/> Handout: (S) ➔ Chapter 10: Journal Questions ➔ Chapter 10: Self-Assessment: Lesson Goals ➔ Review of Essential Skills: Chapter 10	

Here are some of the *Key Words* that are being used in this chapter:

*Event *theoretical probability *experimental probability

**** If the class work is not completed during class time, must be done for homework.**

I have read and went over this "STATISTICS AND PROBABILITY (Chance and Uncertainty)-Unit 4 Plan (Chapter 10)" with my child.
JazakAllahu khayran

Parent/Guardian name (print)

Parent/Guardian signature

---/--/---- (dd/mm/yyyy)



Address: 14525 127 ST, Edmonton, AB T6V 0B3 Phone: (780) 454-4573

4th Muharram, 1438
September 14, 2018

RE: Chapter 10- Probability Information Letter

As-salaamu Alaikum Wa Rahmatu Allahi Wa Barakaatuhu, ("Peace be unto you and so may the mercy of Allah and His blessings").

Dear Respected Parents and Guardians of Grade 6:

Over the next one week, your child will be learning about probability. Your child will learn to determine all of the possible outcomes and calculate the theoretical probability of an outcome or event, and how to test predictions through probability experiments. Your child will compare and explain the differences between theoretical probability and the experimental results of an outcome or event as well as use this information to make generalizations about probability. For example, students will discover that as the number of trials in an experiment increase, the experimental probability can be expected to approach the theoretical probability.

To reinforce the concepts your child is learning at school, you and your child can work on some at-home activities such as these:

- Have your child identify probabilities that an event will occur using the weather, sports section, or other information in a local or national newspaper. Your child can calculate the likelihood of an event and then use a die, online spinner, or similar tool to test his or her predictions.
- Challenge your child to consider how probability directly affects many of his or her favourite board games. Have your child describe how probability, such as rolling a die, spinning a spinner, or drawing cards at random, contributes to the outcome of the game. Your child can also determine the chances that a specific event will occur, for example, calculating the probability of rolling a 1 on a die.
- Have your child conduct simple probability experiments at home. For example, your child might open a bag of coloured candies and determine the theoretical probability of drawing each colour. He or she might then conduct an experiment to determine the experimental probability of picking each colour.

You may want to visit the Nelson website at <http://www.nelson.com/mathfocus/grade6/student/tryout.html> for more suggestions to help your child learn mathematics and develop a positive attitude toward learning mathematics. As well, you can check the Nelson website for links to other websites that provide online tutorials, math problems, brainteasers, and challenges.

Sincerely,

Mustafizur Rahman, **ATA, OPC, OCT**
Ed.D (candidate), **MEd, BEd, BSc**
Grade 6 Math // 6C: Art & Health

Scaffolding for Getting Started

 Page 2

STUDENT BOOK PAGES 324–325

C. How many fruit snacks does Robin have to choose from? _____

About how many times in 8 days would you expect Robin to pick a fruit snack?

About how many times in 40 days would you expect Robin to pick a fruit snack?

D. Put paper strips with the names of the 8 snacks in a paper bag. Use Robin's steps to pick snacks for 40 school days. Record your results in this tally chart.

Snacks for 40 School Days

Snack	Result
apple	
baby carrots	
banana	
celery sticks	
grapes	
orange	
rice cake	
string cheese	

E. About how many times in 40 school days would Robin pick a fruit snack? Use your results from Part D.

F. Compare your prediction in Part C to your results in Part E. How close was your prediction in Part C? Explain.

Scaffolding for Getting Started Page 1

STUDENT BOOK PAGES 324–325

Every school day, Robin packs a lunch. To choose snacks for her lunches, she conducted an experiment. She wrote the names of 8 snacks on paper strips, put the paper strips in a bag, and then followed these steps:

Step 1 Shake the bag, reach into it, and pick a paper strip without looking.

Step 2 Record the name of the snack.

Step 3 Put the paper strip back in the bag.

Robin repeated these steps until she had a list of snacks for the next 40 school days.

rice cake	apple	baby carrots	string cheese
banana	grapes	orange	celery sticks

? About how many fruit snacks did Robin likely pick for the next 40 days?

A. Were the 8 snacks equally likely to be picked? Explain.

B. Predict the number of times in every 8 school days that Robin picked each snack. Explain your thinking.

Name: _____ Date: _____

Mid-Chapter Review—Frequently Asked Questions

STUDENT BOOK PAGE 332

Q: How can you determine the probability of an outcome or event?

A: _____

Name: _____ Date: _____

Chapter Review—Frequently Asked Questions

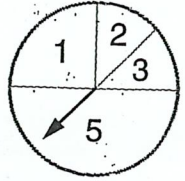
STUDENT BOOK PAGE 342

Q: How do experimental probabilities compare with the theoretical probability?

A: _____

Chapter 10: Probability

You can describe the probability of an event using words such as *impossible*, *possible*, *unlikely*, *likely*, and *certain*.



1. Tara spins the spinner. She makes a table to show her results.

a) What is the experimental probability of landing on a 1? _____

b) Why did the spinner land on 5 the most? _____

c) What number should Tara write for 4? Explain how you know.

Tara's Experiment

Number	Times Spun
1	10
2	5
3	5
4	?
5	30

2. Colm rolls a die. He makes a table to show his results.

- a) How many times did Colm roll the die? _____
- b) What is the experimental probability of landing on 2? _____
- c) Which did Colm roll the most, numbers greater than 5 or numbers less than 5? Why do you think this happened?

Colm's Experiment

Number	Times Rolled
1	10
2	12
3	11
4	10
5	14
6	13



Unit: **STATISTICS AND PROBABILITY (Chance and Uncertainty)**

Chapter 10: Probability

Journal Questions (Hint: *Make sure to show all your work.*):

1. What is the theoretical probability of rolling an even number on a die numbered from 1 to 12?

A. 2:12

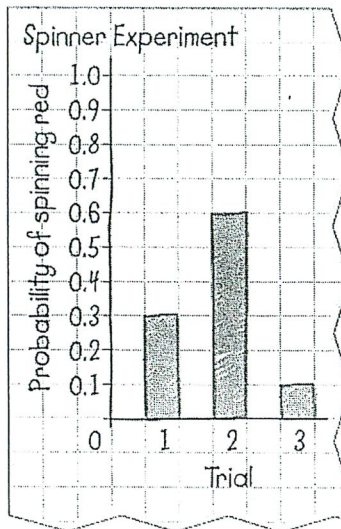
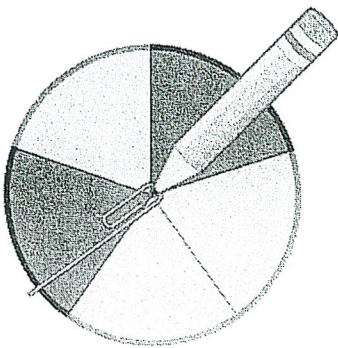
B. $\frac{6}{12}$

C. 1.0

D. $\frac{10}{12}$

2. Liam tested the spinner at the right to see how often he would spin red. The graph at the left shows his experimental probabilities. Which statement is *not* true?

- A. No trials matched the theoretical probability.
- B. Trial 1 was close to the theoretical probability.
- C. Trial 2 was less than the theoretical probability.
- D. Trial 3 was less than the theoretical probability.



Name: _____ Date: _____

Chapter 10 Self-Assessment: Lesson Goals

Place a check mark in the box that best describes your work.

Lesson Goals	Yes, on my own	Yes, with help	Sometimes/ Not sure	Not yet
I can predict and determine the experimental probability of an outcome.				
I can determine theoretical probabilities of outcomes and events.				
I can compare predicted and actual results of a probability experiment.				
I can explain how to use probability to solve problems.				

Choose one of your answers from above. Give your evidence.

My evidence for _____ is
