Week Jan 13-17 Lesson Plan Overview

Monday - Wrap up the Horse RACE probability example with the review of the table of possible outcomes. Use the term sample space to describe the outcomes. Show a dot plot of predicted values to show the bell curve distribution. Continue with a bar chart of the Gummy bag outcomes.

Tuesday - Work in small groups with in class on probability questions from the LUMOS books with handout of certain problems for each group to complete based on reading level.

Wednesday

- Continue Group/Class Examples with session in LUMOS book copies Lesson 5 and 6

Thursday - Do the PSSA samplers from the next slides as review

Friday - Makeup Day with some groups able to advance to independent work on studyisland on probability sections while others finish LUMOS handout problems with resource staff in the room. ALL update folder for use on test on Tuesday for final grade for

Unit Objectives - Math 7 PSSA

ASSESSMENT ANCHOR			
M07.D-S.3	Investigate chance processes and develop, use, and evaluate probability models.		
DESCRIPTOR		**ELIGIBLE CONTENT**	
M07.D-S.3.1	Predict or determine the likelihood of outcomes.	**M07.D-S.3.1.1**	Predict or determine whether some outcomes are certain, more likely, less likely, equally likely, or impossible (i.e., a probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event).

ASSESSMENT ANCHOR			
M07.D-S.3	Investigate chance processes and develop, use, and evaluate probability models.		
DESCRIPTOR		**ELIGIBLE CONTENT**	
M07.D-S.3.2	Use probability to predict outcomes.	**M07.D-S.3.2.1**	Determine the probability of a chance event given relative frequency. Predict the approximate relative frequency given the probability.
			Example: When rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times but probably not exactly 200 times.
		M07.D-S.3.2.2	Find the probability of a simple event, including the probability of a simple event **not** occurring.
			Example: What is the probability of **not** rolling a 1 on a number cube?
		M07.D-S.3.2.3	Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.

Examples from studyisland.com

The probability of randomly selecting a white flower from a garden that has green, pink, yellow, and white flowers is 12%.

Which of the following describes the likelihood of selecting a white flower?

- **A.** unlikely
- **B.** neither unlikely nor likely
- **C.** likely

Miss Nestor is randomly passing out books to her students for free reading time. In her book basket, she has 8 mysteries, 4 historical fiction novels, and 8 biographies. If there are 10 students in Miss Nestor's class for free reading time today, which of the following is the best prediction of the number of students who will receive historical fiction novels for free reading time?

- **A.** 4
- **B.** 2
- **C.** 5
- **D.** 3

2023

15. A crate contains green, red, and yellow apples. Information about the number of apples of each color in the crate is listed below.

    - green: 24
    - red: 15
    - yellow: ?

One apple is randomly selected from the crate. The probability of the apple being red is $\frac{1}{3}$. How many yellow apples are in the crate?

A. 2

B. 6

C. 39

D. 45

15. A nursery sells tulip plants. Each plant has 1 tulip. The tulips come in 4 different colors. The tulip plants available at the nursery are listed below.

- 22 plants with a red tulip
- 30 plants with a pink tulip
- 28 plants with a yellow tulip
- 20 plants with a white tulip

Amy purchases one tulip plant at random. What is the probability that Amy's tulip plant has a tulip that is **not** pink?

A. $\dfrac{1}{4}$

B. $\dfrac{3}{10}$

C. $\dfrac{7}{10}$

D. $\dfrac{3}{4}$

2023

16. Dorian and Sarah are the only two students running for class president. There are 311 votes in the election. Every vote is for either Dorian or Sarah. Which outcome is **certain** to happen?

   A.   Either Dorian or Sarah will receive exactly 156 votes.

   B.   Neither Dorian nor Sarah will receive exactly 156 votes.

   C.   Either Dorian or Sarah will receive at least 156 votes.

   D.   Neither Dorian nor Sarah will receive at least 156 votes.

Review from PSSA Sampler 2022

16. The table below shows the number of each color of paper clip in a container.

Paper Clips in a Container

Color of Paper Clips	Number of Paper Clips
blue	13
green	4
white	8
yellow	10

A paper clip is randomly selected from the container three times and is replaced each time. What is the **approximate** probability of first selecting a blue paper clip and then 2 green paper clips?

A.   0.00397

B.   0.00485

C.   0.04245

D.   0.08571

2022 - Tuesday's opener

14. Mr. Eliaz randomly selects a student from his algebra class each day. Each student is equally likely to be selected. There is an equal number of male and female students in his class. On Monday, Tuesday, Wednesday, and Thursday of this week, the randomly selected student is a male student. Which statement **best** describes the probability Mr. Eliaz selects a male student on Friday?

   A. The probability Mr. Eliaz selects a male student on Friday is the same as it was on each of the other days.

   B. The probability Mr. Eliaz selects a male student on Friday is less than it was on other days because he has already selected a male student 4 days in a row.

   C. The probability Mr. Eliaz selects a male student on Friday is greater than it was on other days because he has already selected a male student 4 days in a row.

   D. The probability Mr. Eliaz selects a male student on Friday is impossible to determine without knowing how many students are in his class.

13. A town has a population of 7,500. The mayor asked two different employees to conduct a survey to determine whether residents of the town are in favor of the construction of a new baseball stadium.

2022

- Denise surveyed 150 randomly selected residents at a recent baseball game.
- Tamira surveyed 150 randomly selected residents living in different sections of town.

The table below shows the results of the two surveys.

New Baseball Stadium

	In Favor	Opposed	No Opinion
Denise's Survey	125	20	5
Tamira's Survey	30	105	15

Which statement identifies the more reliable survey and provides a valid conclusion based on that survey?

A. Denise's survey is more reliable than Tamira's survey, and approximately 6,250 residents of the town would likely be in favor of the construction of a new baseball stadium.

B. Denise's survey is more reliable than Tamira's survey, and approximately 1,250 residents of the town would likely be opposed to the construction of a new baseball stadium.

C. Tamira's survey is more reliable than Denise's survey, and approximately 1,500 residents of the town would likely be in favor of the construction of a new baseball stadium.

D. Tamira's survey is more reliable than Denise's survey, and approximately 6,000 residents of the town would likely be opposed to the construction of a new baseball stadium.