LESSON MAKER PRO

Predict the Next

Use collected results to estimate what may happen next.

GRADE 7 · 7.DSP.C.14.a

7.DSP.C.14.a "Collect and use data to predict probabilities of events."

NAME _____ DATE _____

USE THE PAST RATE

To find an experimental probability, divide the number of times an event happened by the total number of trials. To predict how often it may happen in a new set of trials, multiply that probability by the number of new trials. A prediction is an estimate, not a guarantee.

WORKED EXAMPLE

A music app played songs at random. Use the recorded results to predict how many dance songs it would play in the next 90 songs.

RECORDED SONGS

Song type	Number played
Dance	13
Chill	17

1. Add the recorded songs: 13 + 17 = 30.
2. Find the past rate for dance songs: 13/30.
3. Multiply by the new number of songs: 13/30 × 90 = 39.

Answer: About 39 dance songs.

PRACTICE 6 problems

1 Use the arrival records to find the experimental probability that the bus is on time.

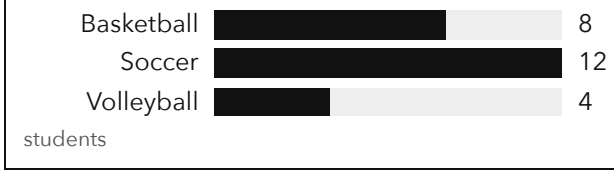
BUS ARRIVAL RECORDS

Arrival	Number of days
On time	18
Late	6

ANSWER _____

2 Use the survey results to find the experimental probability that a student chose soccer.

FAVORITE SPORTS SURVEY



ANSWER _____

3 Cards were drawn from a bag and replaced after each draw. Based on the results, predict how many blue cards would be drawn in the next 48 draws.

RECORDED CARD DRAWS

Color	Number drawn
Blue	15
Red	5

ANSWER _____

4 Use the survey results to find the experimental probability that a student chose either funny clips or science clips.

FAVORITE SHORT VIDEOS



ANSWER _____

5 H means heads and T means tails. Use the recorded coin flips to find the experimental probability of heads. Then predict the number of heads in the next 32 flips.

FOUR GROUPS OF COIN FLIPS

Flip 1	Flip 2	Flip 3	Flip 4
H	T	H	H
T	H	T	H
H	T	H	T
H	H	T	H

ANSWER _____

6 A game randomly gives players one of three characters. Based on the recorded results, predict how many knights players would get in the next 50 games.

CHARACTERS RECEIVED

Character	Number received
Mage	4
Knight	10
Archer	6

ANSWER _____

APPLY IT Show your work

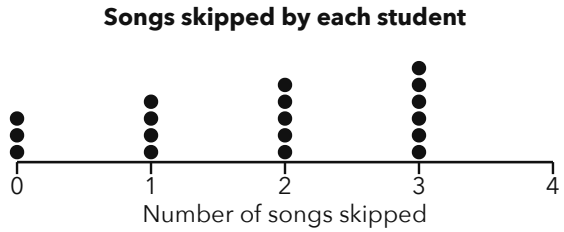
1 At a school arcade night, students recorded prizes from a prize wheel. Based on their results, predict how many stickers the wheel would give out in the next 80 spins.

PRIZE WHEEL RESULTS

Prize	Number won
Sticker	14
Keychain	10
Wristband	8

ANSWER _____

2 Each dot shows how many songs one student skipped during a four-song playlist test. Find the experimental probability that a student skipped exactly 3 songs. Then predict how many of the next 54 students would skip exactly 3 songs.



ANSWER _____

CHALLENGE One step up

Two students tracked rare badges from the same game's mystery boxes. Combine their results to predict how many rare badges would appear in the next 80 boxes. Explain why you combine the counts instead of averaging the students' two probabilities.

MYSTERY BOX RESULTS

Student	Rare badges	Other prizes
A	10	6
B	9	15

WORK SPACE AND ANSWER

ANSWER KEY

Predict the Next

GRADE 7 · 7.DSP.C.14.a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Use the arrival records to find the experimental probability that the bus is on time.	**3/4**
2	Use the survey results to find the experimental probability that a student chose soccer.	**1/2**
3	Cards were drawn from a bag and replaced after each draw. Based on the results, predict how many blue cards would be drawn in the next 48 draws.	**36 blue cards**
4	Use the survey results to find the experimental probability that a student chose either funny clips or science clips.	**1/2**
5	H means heads and T means tails. Use the recorded coin flips to find the experimental probability of heads. Then predict the number of heads in the next 32 flips.	**5/8; about 20 heads**
6	A game randomly gives players one of three characters. Based on the recorded results, predict how many knights players would get in the next 50 games.	**25 knights**

PART 2 · APPLY IT

1. **About 35 stickers.** There were 32 spins, and 14 gave stickers. Multiply 14/32 by 80 to get 35.
2. **1/3; about 18 students.** Six of the 18 students skipped exactly 3 songs, so the experimental probability is 6/18 = 1/3. Multiply 1/3 by 54 to predict 18 students.

CHALLENGE

About 38 rare badges. Together, the students found 19 rare badges in 40 boxes, and 19/40 × 80 = 38. Combining counts gives each box equal weight; averaging the two probabilities would give the students' unequal-sized samples equal weight.

Accept equivalent fractions and predictions stated without “about.” Predictions use the observed rates and are not guaranteed outcomes.