

Trial Trend Tracker

Use experiment results to make smart predictions.

GRADE 7 • TEKS 7.6.H

7.6.H "solve problems using qualitative and quantitative predictions and comparisons from simple experiments; and"

NAME _____

DATE _____

USE RESULTS TO PREDICT

Experimental probability is the number of times an event happens divided by the total number of trials. To predict a new number of trials, multiply the experimental probability by the new total, then use the fraction to compare how likely events are.

WORKED EXAMPLE

A spinner landed on striped 7 times in 28 spins. Predict how many striped landings there will be in 44 spins.

1. Experimental probability = $7/28 = 1/4$.
2. Predicted striped landings = $44 \times 1/4$.
3. $44 / 4 = 11$.

Answer: 11 striped landings

PRACTICE 6 problems

- 1** A spinner landed on purple 8 times in 32 spins. Predict how many purple landings there will be in 60 spins.

ANSWER _____

- 2** Out of 45 tossed bottle caps, 27 landed logo-up. What is the experimental probability of landing logo-up?

ANSWER _____

- 3** A computer simulation selected a multiple of 3 on 12 of 36 trials and a multiple of 5 on 9 of 36 trials. Based on the results, which event is more likely?

ANSWER _____

- 4** A mystery box gave a sticker on 2 of 25 openings. Based on this experiment, is getting a sticker likely or unlikely?

ANSWER _____

- 5** A marble landed in the star zone 14 times in 56 rolls. Predict how many star-zone landings there will be in 84 rolls.

ANSWER _____

- 6** Game A had 18 wins in 30 rounds. Game B had 21 wins in 35 rounds. Which game had the higher experimental win rate?

ANSWER _____

APPLY IT Show your work

- 1** During 48 plays of an arcade basketball game, Maya made 18 bonus shots. If she plays 80 more games at the same experimental rate, how many bonus shots should she predict?

WORK SPACE

ANSWER _____

- 2** In a school music app test, 16 of 40 students chose Playlist A. In a separate test, 21 of 60 students chose Playlist B. Which playlist had the higher experimental chance of being chosen?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A game app gave a rare item in 10 of 40 openings on Monday and in 14 of 56 openings on Tuesday. Combine the results, then predict how many rare items will appear in the next 92 openings.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A spinner landed on purple 8 times in 32 spins. Predict how many purple landings there will be in 60 spins.	15 purple landings
2	Out of 45 tossed bottle caps, 27 landed logo-up. What is the experimental probability of landing logo-up?	3/5
3	A computer simulation selected a multiple of 3 on 12 of 36 trials and a multiple of 5 on 9 of 36 trials. Based on the results, which event is more likely?	Selecting a multiple of 3
4	A mystery box gave a sticker on 2 of 25 openings. Based on this experiment, is getting a sticker likely or unlikely?	Unlikely
5	A marble landed in the star zone 14 times in 56 rolls. Predict how many star-zone landings there will be in 84 rolls.	21 star-zone landings
6	Game A had 18 wins in 30 rounds. Game B had 21 wins in 35 rounds. Which game had the higher experimental win rate?	Neither game. Both had an experimental win rate of 3/5.

PART 2 • APPLY IT

- 30 bonus shots** The experimental rate is $18/48$, which simplifies to $3/8$. Multiply 80 by $3/8$ to get 30.
- Playlist A** Playlist A has a rate of $16/40 = 2/5$. Playlist B has a rate of $21/60 = 7/20$, so Playlist A has the higher rate.

CHALLENGE

23 rare items

Accept equivalent fractions for experimental probabilities. For qualitative and comparison items, accept clear wording that identifies unlikely events, higher rates, or equal rates.