LESSON MAKER PRO

Chance Check

Find the chance of an event.

GRADE 7 · MT.7.SP.5

MT.7.SP.5 "Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring."

NAME _____ DATE _____

THE BIG IDEA

Probability is a number from 0 to 1. For equally likely outcomes, divide the number of outcomes you want by the total number of outcomes. A probability of 0 means impossible, and 1 means certain.

WORKED EXAMPLE

One token is picked at random. What is P(yellow)?

TOKENS

Color	Number
Yellow	7
Purple	9

1. Total tokens: 7 + 9 = 16.
2. Yellow tokens: 7.
3. P(yellow) = 7/16.

Answer: 7/16

PRACTICE 4 problems

1 A bag holds 2 red and 4 blue chips. What is P(red)?

ANSWER _____

2 You roll a fair six-sided number cube. What is P(rolling 10)?

ANSWER _____

3 A fair coin lands heads or tails. What is P(heads or tails)?

ANSWER _____

4 A whole number from 1 to 12 is chosen at random. What is P(even)?

ANSWER _____

APPLY IT Show your work

1 A music app shuffles these songs. What is P(rap)?

PLAYLIST

Music	Songs
Rap	6
Rock	4
Jazz	2

ANSWER _____

2 A game has 25 equally likely prize cards. Ten give bonus points. What is P(no bonus) as a decimal?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A random game reward is a badge with probability 1/4 or coins with probability 1/2. No reward is both. What is P(neither)? Explain.

WORK SPACE AND ANSWER

ANSWER KEY

Chance Check

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A bag holds 2 red and 4 blue chips. What is P(red)?	**1/3**
2	You roll a fair six-sided number cube. What is P(rolling 10)?	**0**
3	A fair coin lands heads or tails. What is P(heads or tails)?	**1**
4	A whole number from 1 to 12 is chosen at random. What is P(even)?	**1/2**

PART 2 · APPLY IT

1. **1/2** There are 12 songs, and 6 are rap. The probability is 6/12 = 1/2.
2. **0.6** Fifteen cards give no bonus. The probability is 15/25 = 3/5 = 0.6.

CHALLENGE

1/4. The chance of a badge or coins is 1/4 + 1/2 = 3/4, so the chance of neither is 1 - 3/4 = 1/4.

Accept equivalent fractions or decimals unless a form is specified. For the challenge, accept reasoning that correctly subtracts the two nonoverlapping chances from 1.