LESSON MAKER PRO

Chance Fraction Quest

Count the outcomes, then write the chance.

GRADE 4 · 4.PS.2.c

4.PS.2.c "Write the probability of a given simple event as a fraction between 0 and 1, where there are no more than 24 possible outcomes."

NAME _____ DATE _____

BUILD A PROBABILITY FRACTION

When each outcome has the same chance, put the number of favorable outcomes on top and the total number of possible outcomes on the bottom. Simplify the fraction when you can.

WORKED EXAMPLE

A bag holds 11 equal counters. 4 counters are orange. What is the probability of choosing an orange counter?

1. There are 11 possible outcomes.
2. There are 4 favorable outcomes.
3. Write favorable outcomes over total outcomes: 4/11.

Answer: 4/11

PRACTICE 6 problems

1 A spinner has 8 equal sections. 3 sections are purple. What is the probability of landing on purple?

ANSWER _____

2 A box holds 10 equal game tokens. 2 tokens have a star. What is the probability of choosing a star token?

ANSWER _____

3 You choose one number card from cards numbered 1 through 12. What is the probability of choosing an odd number?

ANSWER _____

4 You roll a standard number cube. What is the probability of rolling a 5?

ANSWER _____

5 A wheel has 9 equal sections. 2 sections are yellow. What is the probability of landing on yellow?

ANSWER _____

6 A jar holds 15 equal beads. 5 beads are silver. What is the probability of choosing a silver bead?

ANSWER _____

APPLY IT Show your work

1 At robotics club, a prize bin holds 18 sealed mini-build kits. 7 kits are glow kits, and the rest are regular kits. You choose one kit without looking. What is the probability of choosing a glow kit?

WORK SPACE

ANSWER _____

2 An art app randomly chooses 1 of 20 daily design prompts. 9 prompts are about animals. What is the probability that the app chooses an animal prompt?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A set has 24 equal game tiles, and 8 tiles are blue. Jay writes the probability of choosing blue as 8/24. Tia writes it as 1/3. Are both students correct? Explain your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Chance Fraction Quest

GRADE 4 · 4.PS.2.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A spinner has 8 equal sections. 3 sections are purple. What is the probability of landing on purple?	**3/8**
2	A box holds 10 equal game tokens. 2 tokens have a star. What is the probability of choosing a star token?	**1/5**
3	You choose one number card from cards numbered 1 through 12. What is the probability of choosing an odd number?	**1/2**
4	You roll a standard number cube. What is the probability of rolling a 5?	**1/6**
5	A wheel has 9 equal sections. 2 sections are yellow. What is the probability of landing on yellow?	**2/9**
6	A jar holds 15 equal beads. 5 beads are silver. What is the probability of choosing a silver bead?	**1/3**

PART 2 · APPLY IT

1. **7/18** There are 18 possible kits and 7 favorable glow kits. Write 7/18.
2. **9/20** There are 20 possible prompts and 9 animal prompts. Write 9/20.

CHALLENGE

Yes. Both are correct because 8/24 simplifies to 1/3.

Accept equivalent fractions, including fractions that are not simplified, when they show the correct favorable outcomes over total outcomes. For the challenge, accept an explanation that 8/24 equals 1/3 because both the numerator and denominator are divided by 8.