

Possible Solutions

A student is trying to predict what kind of ice cream each of her 10 friends will choose at her birthday party. Her friends can choose from one of the following flavors: chocolate, vanilla, strawberry or cookies-n-cream. Which of the following simulations could the student use to make her prediction?

- A. Roll a six-sided die 10 times.
- B. Flip four coins 10 times.
- C. Spin a spinner with four equal sections 10 times.
- D. Draw either a heart, a diamond, a spade or a club from a deck of cards 10 times, with replacement.

Solution 1

4 items in sample space with 10 friends' choices

Chocolate

Vanilla

Strawberry

Cookies-n-cream

- A die has 6 sides
- A coin has only 2 sides
- The spinner given has 4 equal different colored sections
- The deck of cards has 4 suits; therefore, chocolate could be represented with clubs, vanilla could be represented with diamonds, strawberry could be represented with hearts and cookies-n-cream could be represented with spades.

This example could be simulated using the deck of cards. A card can be drawn to represent each of the 10 friends and the suit of the card will determine the flavor of ice cream.

Solution 2

This example could be simulated by the spinner with 4 equal different colored sections. Each spin of the spinner would represent one of the 10 friends' ice cream choices.