

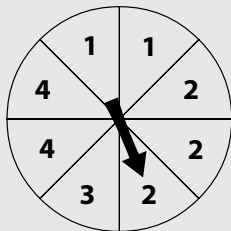
44

Probability

D.8.I D.9.I D.11.K

Example

Paul is playing a game with a spinner.



What is the probability of the spinner landing on 2?

- A. $\frac{1}{4}$ B. $\frac{3}{8}$
 C. $\frac{1}{2}$ D. $\frac{3}{5}$

Thinking It Through

Ask How many equal sections does the spinner have? 8

How many sections have the number 2? 3

Create a fraction, using the number of equal sections (8) as the denominator and the number of 2s (3) as the numerator.

The probability of spinning a 2 is $\frac{3}{8}$, answer B.

Review

- **Probability** is the chance that an event will happen. It is defined as the following fraction:

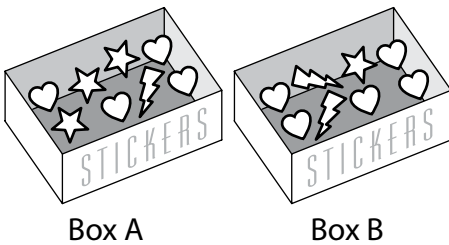
$$\frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

- The number of possible outcomes is the *total* of all of the outcomes. The number of favorable outcomes is the number of outcomes you are interested in.
- Probability can be expressed as a ratio between 0 and 1.
- An event that is **certain** must happen (probability of 1). An **impossible** event cannot happen (probability of 0).
- An event that is **likely** has a greater chance of happening than not happening. An event that is **unlikely** has a greater chance of *not* happening than happening.
- **Equally likely** events have the same chance of happening. For example, tossing heads or tails on a coin is equally likely.

Probability

Directions: Carefully read each question. Circle the letter of the correct answer.

1. Haley has two boxes of stickers. If she picks a sticker without looking, what are the chances of picking a heart from Box A compared to the chance of picking it from Box B?



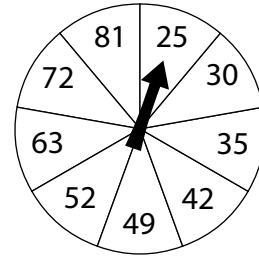
- A. impossible
 B. less likely
 C. equally likely
 D. more likely
2. Pat put the names of the 12 months in a hat. She pulls out one month at random. What is the probability that she picks a month beginning with a vowel?

- A. $\frac{1}{6}$ B. $\frac{1}{4}$
 C. $\frac{1}{3}$ D. $\frac{5}{12}$

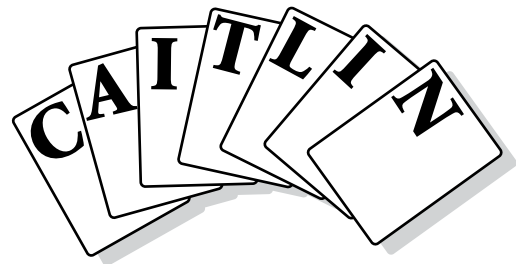


Probability compares favorable outcomes to possible outcomes. It is expressed as a fraction in simplest form.

3. What is the probability of the spinner landing on a number greater than 42?



- A. $\frac{4}{9}$ B. $\frac{1}{2}$
 C. $\frac{5}{9}$ D. $\frac{5}{8}$
4. Caitlin wrote each of the letters of her name on separate index cards and placed them face down on a desk.



If Caitlin picks one letter at random, what is the probability that she will pick a vowel?

- A. $\frac{2}{7}$ B. $\frac{1}{3}$
 C. $\frac{3}{7}$ D. $\frac{1}{2}$