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Probability

E.3.1.1 E.3.1.2

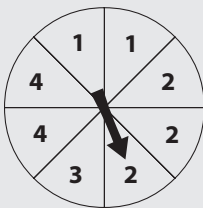
Example

Katrina tosses a number cube. The chance of tossing an odd number compared to the chance of tossing an even number

- A is more likely.
- B is less likely.
- C is equally likely.
- D is impossible.

Example

What is the probability of this 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 numbers are on a number cube? 6

How many odd numbers? 3

How many even numbers? 3

The chance of tossing an odd number is the same as the chance of tossing an even number, so the events are *equally likely*, answer C.

Thinking It Through

Ask How many equal sections does the spinner have? 8

How many sections have the number 2? 3 sections

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

Review

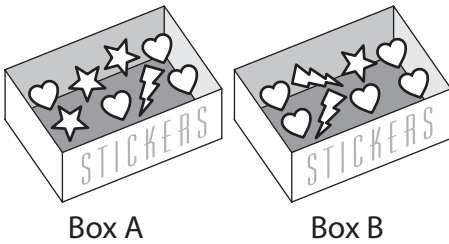
• **Probability** is the chance that an event will happen. It is defined as the following fraction: $\frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$

- The number of possible outcomes is the *total* number of outcomes. The number of favorable outcomes is the number of outcomes that you want.
- An event that is **certain** must happen. An **impossible** event cannot happen.
- 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 Read and solve each question. Then circle the letter of the best answer.

1. Haley has two boxes of stickers.



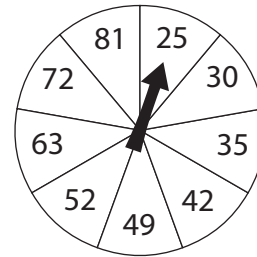
If she picks a sticker without looking, what are the chances of picking a heart from Box A compared to Box B?

- A less likely
 B equally likely
 C more likely
 D impossible
2. Patricia put the names of each of the 12 months in a hat. She will pull out one month at random. What is the probability that she will pick a month that begins with a vowel?
- A $\frac{1}{6}$
 B $\frac{1}{4}$
 C $\frac{1}{3}$
 D $\frac{5}{12}$

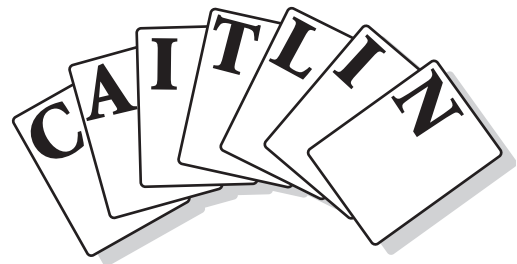


Probability compares favorable outcomes to possible outcomes.

- Use the spinner below to answer question 3.



3. What is the probability of the spinner landing on a number **greater** than 42?
- A $\frac{4}{9}$ C $\frac{5}{9}$
 B $\frac{1}{2}$ D $\frac{5}{8}$
4. Caitlin wrote each of the letters of her name on separate index cards and places them face down on a desk.



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

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