

Probability of Independent Events

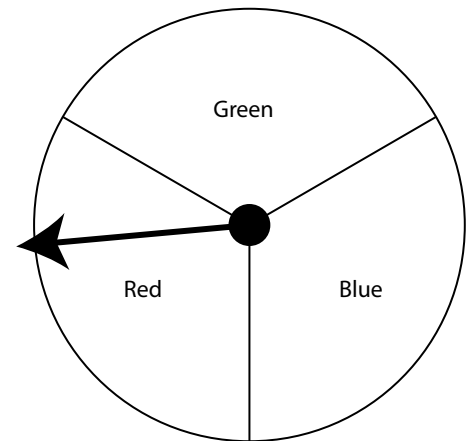
Probability is the likelihood or chance of something happening. It can be expressed as a fraction (or a decimal or percent). Fractions are used in the following way:

If an event is likely to happen, then the probability is _____. If an event is unlikely to happen, then the probability is _____.

The **Sample Space** is a list of all the possible outcomes in an **experiment**.

Example 1

In the spinner shown at right, what is the probability of the arrow landing on the green section?



Example 2

If you roll a six-sided die, what is the probability that you will get a number less than three?

Independent Events

Sometimes two things happen that are not connected in any way. Let's think of some examples:

The probability of two independent events happening can be shown in a variety of ways. One way is a table. For example:

Another way is to make a tree diagram:

To calculate the overall probability of two independent events BOTH happening, we _____ the probabilities of each.

Example 3

On any given day, there is a one-third probability that Mr. McLellan will wear white shoes, while there is a one-half probability that Mr. Tuerlings will wear white shoes. What is the probability that they will both wear white shoes on the same day?

Example 4

What is the probability of rolling two dice and getting a SUM of 7?