

# What are some Examples of Using Probability?

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The process of calculating chances, estimating likelihood, and predicting probabilities are all methods used to assess the likelihood of certain events occurring. These methods utilize mathematical and statistical analysis to determine the probability of a specific outcome. They can be applied to various scenarios, such as winning the lottery, making profitable investments, predicting disease outbreaks, flight delays, natural disasters, car accidents, sports outcomes, job prospects, medical treatments, and weather events. By using these methods, individuals and organizations can make informed decisions and plan accordingly.

## 10 Examples of Using Probability in Real Life

**Probability refers to how likely an event is to occur.**

**Probability is used in all types of areas in real life including weather forecasting, sports betting, investing, and more.**

**The following examples share how probability is used in 10 real-life situations on a regular basis.**

### Example 1: Weather Forecasting

**Perhaps the most common real life example of using probability is weather forecasting.**

**Probability is used by weather forecasters to assess how likely it is that there will be rain, snow, clouds, etc. on a given day in a certain area.**

**Forecasters will regularly say things like "there is an 80% chance of rain today between 2PM and 5PM" to**

indicate that there's a high likelihood of rain during certain hours.

#### Example 2: Sports Betting

Probability is heavily used by sports betting companies to determine the odds they should set for certain teams to win certain games.

For example, a sports betting company may look at the current record of two teams and determine that team A has a 90% probability of winning while team B has just a 10% probability of winning.

Based on these probabilities, the company would offer a higher payout for people who bet on team B to win since it's highly unlikely that team B will actually win.

#### Example 3: Politics

Political forecasters use probability to predict the chances that certain candidates will win various elections.

For example, a forecaster might say that candidate A has a 60% chance of winning, candidate B has a 20% chance of winning, candidate C has a 10% chance of

winning, etc. to give voters an idea of how likely it is that each candidate will win.

**Note:** A real-life example of a site that uses probability to perform political forecasting is .

#### Example 4: Sales Forecasting

Many retail companies use probability to predict the chances that they'll sell a certain amount of goods in a given day, week, or month.

This means they'll need to make sure they have at least 100 products on hand to sell (or preferably more) so they don't run out.

#### Example 5: Health Insurance

Health insurance companies often use probability to determine how likely it is that certain individuals will spend a certain amount on healthcare each year.

For example, a company might use factors like age, existing medical conditions, current health status, etc. to determine that there's a 90% probability that a certain individual will spend \$10,000 or more on healthcare in a given year.

**Individuals who are likely to spend more on healthcare will be charged higher premiums because the insurance company knows that they'll be more expensive to insure.**

#### **Example 6: Grocery Store Staffing**

**Grocery stores often use probability to determine how many workers they should schedule to work on a given day.**

**For example, a grocery store may use a model that tells them there is a 75% chance that they'll have more than 800 customers come into the store on a given day.**

**Based on this probability, they'll schedule a certain amount of workers to be at the store on that day to handle that many customers.**

#### **Example 7: Natural Disasters**

**The environmental departments of countries often use probability to determine how likely it is that a natural disaster like a hurricane, tornado, earthquake, etc. will strike the country in a given year.**

**If the probability is quite high, then the department will**

**make decisions about housing, resource allocation, etc. that will minimize the effects done by the natural disaster.**

#### **Example 8: Traffic**

**Ordinary people use probability every day when they decide to drive somewhere.**

**Based on the time of day, location in the city, weather conditions, etc. we all tend to make probability predictions about how bad traffic will be during a certain time.**

**For example, if you think there's a 90% probability that traffic will be heavy from 4PM to 5:30PM in your area then you may decide to wait to drive somewhere during that time.**

#### **Example 9: Investing**

**Investors use probability to assess how likely it is that a certain investment will pay off.**

**For example, a given investor might determine that there is a 1% chance that the stock of company A will increase 100x during the upcoming year.**

**Based on this probability, the investor will decide how much of their net worth to invest in the stock.**

#### **Example 10: Card Games**

**Probability is routinely used by anyone who plays card games on a regular basis.**

**For example, professional poker players use probability to determine how likely it is that a certain hand of cards will win and this informs them on how much they should bet.**

**If a player knows that there is a high probability that they will win a certain hand based on their cards, they will be more likely to bet more money.**

**Conversely, if they think the probability that they'll win is low then they may bet significantly less money.**

#### **Additional Resources**

**The following tutorials provide additional information about probability:**

### **Examples of Using Conditional Probability in Real Life**