

# What are 10 examples of random variables in real life?

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A random variable is a numerical quantity that takes on different values with a certain probability in real life situations. Here are 10 examples of random variables commonly found in daily life:

1. The outcome of a coin toss
2. The number of cars passing by on a busy street in a given time interval
3. The temperature on a particular day in a city
4. The number of customers entering a store in an hour
5. The height of a randomly selected person from a population
6. The time taken for a bus to arrive at a bus stop
7. The number of goals scored in a soccer match
8. The amount of rainfall in a particular area during a monsoon season
9. The number of defective products in a batch of manufactured goods
10. The weight of a randomly selected fruit from a basket.

## 10 Examples of Random Variables in Real Life

**A is a variable whose possible values are outcomes of a random process.**

**There are two types of random variables:**

**Discrete: Can take on only a countable number of distinct values like 0, 1, 2, 3, 50, 100, etc.**  
**Continuous: Can take on an infinite number of possible values like 0.03, 1.2374553, etc.**

**In this article we share 10 examples of random variables in different real-life situations.**

**Example 1: Number of Items Sold (Discrete)**

**One example of a discrete random variable is the number of items sold at a store on a certain day.**

**Using historical sales data, a store could create a probability distribution that shows how likely it is that they sell a certain number of items in a day.**

**For example:**

Number of Items	Probability
0	.004
1	.023
2	.065
...	...

**The probability that they sell 0 items is .004, the probability that they sell 1 item is .023, etc.**

**Example 2: Number of Customers (Discrete)**

**Another example of a discrete random variable is the number of customers that enter a shop on a given day.**

**Using historical data, a shop could create a probability distribution that shows how likely it is that a certain number of customers enter the store.**

**For example:**

Number of Customers	Probability
0	.01
1	.03
2	.04
...	...

### Example 3: Number of Defective Products (Discrete)

Another example of a discrete random variable is the number of defective products produced per batch by a certain manufacturing plant.

For example:

Number of Defective Products	Probability
0	.44
1	.12
2	.02
...	...

### Example 4: Number of Traffic Accidents (Discrete)

Another example of a discrete random variable is the number of traffic accidents that occur in a specific city on a given day.

Using historical data, a police department could create a probability distribution that shows how likely it is that a certain number of accidents occur on a given day.

## For example:

Number of Traffic Accidents	Probability
0	.22
1	.45
2	.11
...	...

### Example 5: Number of Home Runs (Discrete)

Another example of a discrete random variable is the number of home runs hit by a certain baseball team in a game.

Using historical data, sports analysts could create a probability distribution that shows how likely it is that the team hits a certain number of home runs in a given game.

## For example:

Number of Home Runs	Probability
0	.31
1	.39
2	.12
...	...

### Example 6: Marathon Time (Continuous)

One example of a continuous random variable is the

**marathon time of a given runner.**

**This is an example of a continuous random variable because it can take on an infinite number of values.**

**For example, a runner might complete the marathon in 3 hours 20 minutes 12.0003433 seconds. Or they may complete the marathon in 4 hours 6 minutes 2.28889 seconds, etc.**

**In this scenario, we could use historical marathon times to create a probability distribution that tells us the probability that a given runner finishes between a certain time interval.**

**Example 7: Interest Rate (Continuous)**

**Another example of a continuous random variable is the interest rate of loans in a certain country.**

**This is a continuous random variable because it can take on an infinite number of values. For example, a loan could have an interest rate of 3.5%, 3.765555%, 4.00095%, etc.**

**In this scenario, we could use historical interest rates to**

**create a probability distribution that tells us the probability that a loan will have an interest rate within a certain interval.**

#### **Example 8: Animal Weight (Continuous)**

**Another example of a continuous random variable is the weight of a certain animal like a dog.**

**This is a continuous random variable because it can take on an infinite number of values. For example, a dog might weigh 30.333 pounds, 50.340999 pounds, 60.5 pounds, etc.**

**In this case, we could collect data on the weight of dogs and create a probability distribution that tells us the probability that a randomly selected dog weighs between two different amounts.**

#### **Example 9: Plant Height (Continuous)**

**Another example of a continuous random variable is the height of a certain species of plant.**

**This is a continuous random variable because it can take on an infinite number of values. For example, a plant might have a height of 6.5555 inches, 8.95 inches,**

**12.32426 inches, etc.**

**In this case, we could collect data on the height of this species of plant and create a probability distribution that tells us the probability that a randomly selected plant has a height between two different values.**

**Example 10: Distance Traveled (Continuous)**

**Another example of a continuous random variable is the distance traveled by a certain wolf during migration season.**

**This is a continuous random variable because it can take on an infinite number of values. For example, a wolf may travel 40.335 miles, 80.5322 miles, 105.59 miles, etc.**

**In this scenario, we could collect data on the distance traveled by wolves and create a probability distribution that tells us the probability that a randomly selected wolf will travel within a certain distance interval.**

**Additional Resources**

**The following tutorials provide additional information about variables in statistics:**