

Demand

by Sophia Tutorial



WHAT'S COVERED

This tutorial will cover the law of demand, exploring a demand schedule and demand graph. We will discuss why a demand curve is downward sloping, as well as the concept of ceteris paribus.

Our discussion breaks down as follows:

1. What Is Demand?
2. Demand Schedules and Graphs
3. Law of Demand
 - a. Ceteris Paribus
4. Exceptions to the Law of Demand

1. What Is Demand?

Whether or not you realize it, you use the law of demand every day. Think about the last time you bought something because it was on sale, or used a coupon or an ad to get a deal. Or, perhaps you didn't buy something, because its price was too high.

In all of these situations, you were using demand. This is because demand means that you want something and you have the ability to afford it, or the willingness to pay for it—which is why demand is sometimes called willingness to pay.

2. Demand Schedules and Graphs

Here is an example of a demand schedule, featuring Granny Smith apples.

Price of Granny Smith Apples	Quantity of Granny Smith Apples Each Week
\$2.00	0

\$1.75	1
\$1.50	2
\$1.25	3
\$1.00	4
\$0.75	5
\$0.50	6
\$0.25	7
\$0.00	8

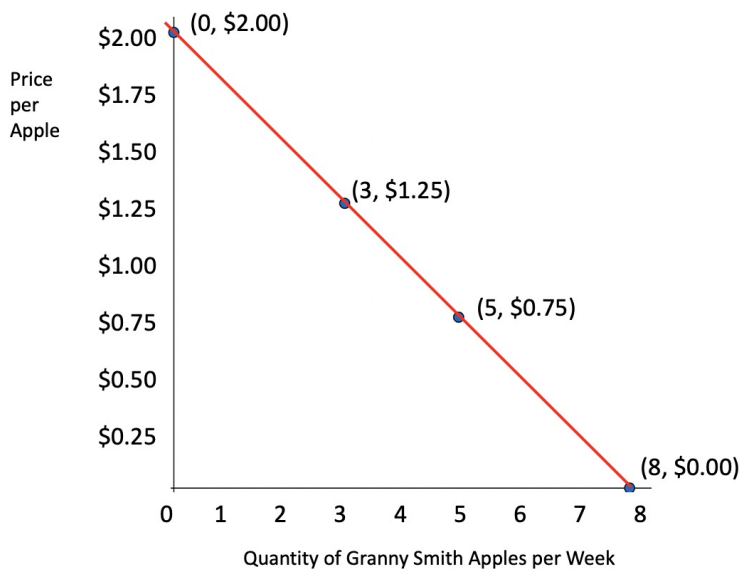
Notice that it details the price of the apple at each respective quantity, as if you were surveyed to find out how many apples you would purchase each week at different prices.

For instance, if each apple was \$2, you would not purchase any apples. As the price goes down to \$1.50, you might buy two per week and treat yourself. If the price was only \$0.50 an apple, you'd purchase six, and if they were \$0.25, you'd purchase seven. Now, if the apples were free, you would buy eight, just over one per day in a given week.

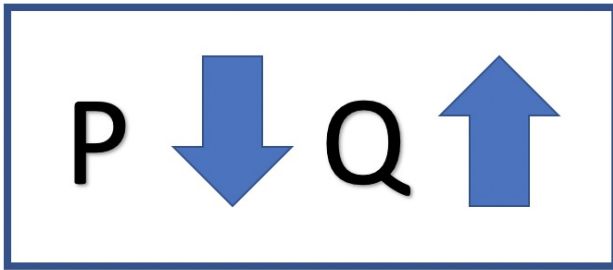
Notice that as the price drops, you would buy more.

We can use the information from the demand schedule to make a demand graph, by putting price on the y-axis--in this case, price per apple--and the quantity you are willing and able to purchase on the x-axis, and simply plotting the points.

You can see that when we plot the points, we are presented with a downward sloping demand curve.



Notice that as the price of Granny Smith apples drops, you buy more--or, in economic terminology, as the price falls, the quantity demanded increases.



Note, the reverse would also be true; as price rises, quantity demanded decreases.

3. Law of Demand

So, why is the demand curve downward sloping? Logically, it makes sense that as price falls, we buy more, but let's explore this in more depth.

Suppose Granny Smith apples are currently priced at \$1 each, and you've already purchased four of them for the week. Do you need a fifth? Well, now that you've already had four, the price will need to be lowered in order to give you an incentive to buy a fifth.

Similarly, if you buy a fifth, you will only purchase another one and eat six apples this week if the price is even lower, at \$0.50.

Therefore, as you are purchasing more and more, the price of apples will need to be lower in order for you to continue to purchase more.

This is essentially the **law of demand**, which is defined as the inverse correlation between price and quantity with all other variables fixed.

3a. Ceteris Paribus

Now, the phrase "all other variables fixed" refers to a concept known as **ceteris paribus**, which means holding all other variables constant.

As the price of Granny Smith apples rises, we can expect that people will buy fewer Granny Smith apples. Ceteris paribus, though, assumes that *only the price* of Granny Smith apples has changed, so therefore, the reason you are buying fewer Granny Smith apples is because the price has changed.

The price of Gala apples didn't change, nor did the price of oranges or bananas. Your income didn't change, either. Nothing else except for the price of Granny Smith apples changed.

Ceteris paribus refers to eliminating all the other variables and focusing on one thing at a time--in this case, that one thing is the price of the good.



TERMS TO KNOW

Law of Demand

The inverse correlation between price and quantity with all other variables fixed

Ceteris Paribus

4. Exceptions to the Law of Demand

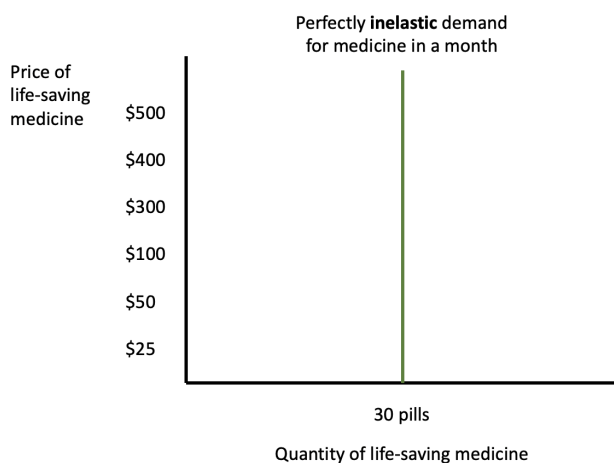
Do you think that there are exceptions to this rule? Is there a product that people will still buy the same amount of, even if the price goes up?

It has been noted that this can happen for reasons of stature or prestige, in the case of items like designer purses, expensive wine, or luxury cars, whereby people purchase them simply to show how wealthy they are.

There are also some other exceptions to the rule of a downward sloping demand curve. Sometimes, there are products that people need to purchase regardless of price, so the quantity does not vary at all as the price changes.

This is known as perfectly inelastic demand.

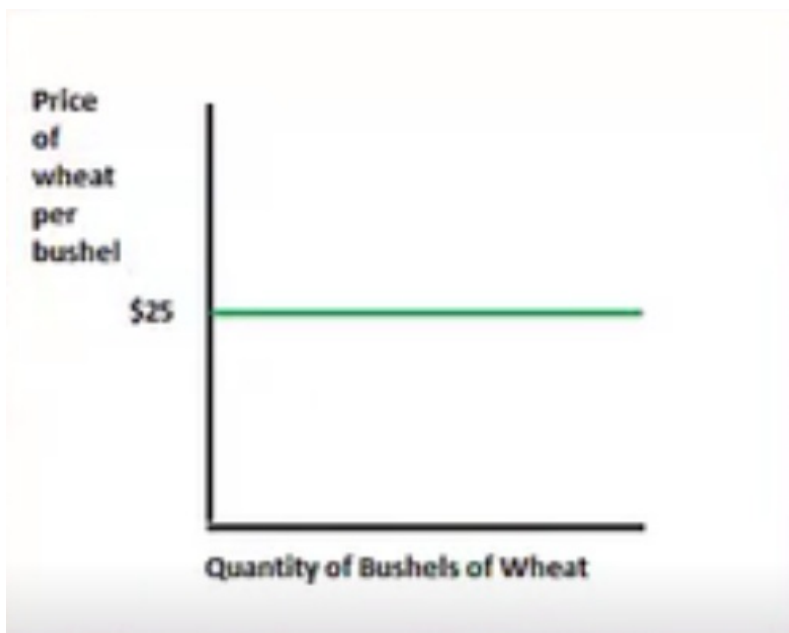
➡ **EXAMPLE** An example of this would be a life-saving medicine that someone needs every day, regardless of price. The graph below shows that a month's supply of a life-saving medicine--30 pills, in this case--is purchased regardless of how expensive it is.



The opposite end of this extreme is slightly more hypothetical. Sometimes, a producer can sell for only one price. At this price, they can sell all that they want, so there is no reason for them to lower the price. If they raise the price, even--hypothetically--by a cent or \$1, no one will purchase it.

This is said to be perfectly elastic demand.

➡ **EXAMPLE** Agricultural products are the closest example of perfectly elastic goods, because they are the same regardless of who is selling. In other words, someone purchasing a bushel of wheat is going to go to the person who is selling it for the lowest amount. If the going rate is \$25 for a bushel of wheat, for instance, and you're a farmer, you can only sell for \$25.



This is another exception to the downward sloping demand curve.



SUMMARY

Today we learned **what demand is** and how the **law of demand** describes the inverse relationship between price and quantity. The law of demand states that as price falls, the quantity demanded rises (and vice versa), assuming **ceteris paribus**, or all other variables fixed. We examined a **demand schedule** and used its data to draw a **demand graph**, noting the downward slope of the demand curve, except in a few rare situations that are **exceptions to the law of demand**.

Source: Adapted from Sophia instructor Kate Eskra.



TERMS TO KNOW

Ceteris Paribus

Holding all other variables constant.

Law of Demand

The inverse correlation between price and quantity with all other variables fixed.