

Ch-2 Elementary Theory of Demand

Good Morning Students,

This lesson is for class 10th for the subject of Economics. The topic for today is "Law of Demand and Changes in Demand" which is covered in Ch-2 'Elementary Theory of Demand' of your book of Economics.

This lesson is being submitted to you on 13.05.24.

Law of Demand:Statement of the law

The law of demand explains the inverse relationship between the price and quantity demanded of a commodity.

"Law of demand states that other things remaining same with the rise in price of a commodity demand for that commodity falls and with the fall in the price demand rises."

In short, normally more of a commodity is demanded at a lower price and less of it at a higher price.

For example, a consumer may demand 2 kg of mangoes at ₹ 100 per kg, he

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may demand 3 kg if the price
falls to ₹ 80 per kg.

Assumptions of the law of Demand.

In the statement of law, the phrase, 'other things remaining same' has been used. It indicates that all factors which affect the demand of a commodity other than price are constant.

In law of demand we only show the effect of change in price on the demand of a commodity keeping all other factors constant.

The assumptions of law of demand are:-

- (i) There is no change in the income of the consumer.
- (ii) There is no change in the price of related goods.
- (iii) There is no change in consumer's taste and habits.
- (iv) There is no change in population.
- (v) Consumers do not expect any change in the price of the commodity in the near future.
- (vi) There is no change in Government Policy.

Features of law of Demand:-

- (i) There is an inverse relationship between the price of a commodity and its quantity demanded. This means if price rises, demand falls and if the price falls demand rises.

If Price $\uparrow$ then Demand $\downarrow$
If Price $\downarrow$ then Demand $\uparrow$

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- (ii) The law indicates the direction and not magnitude of change in demand. That means law of demand will tell us that if price falls then demand rises, but it does not tell us how much of demand will rise with the fall in price.
- (iii) It does not establish a proportionate relationship between price and demand.
That means if price falls by 10%. It does ~~not~~ mean that the demand will increase by 10%.
- (iv) The law explains only the effect of change in price on demand and not the effect of change in demand on price.
In other words, law of demand states if price falls demand will rise and if price rises then demand will fall but same is not necessarily true. That is, if the demand rises, price will also fall.
- (v) Law of demand applies to normal goods.
- (vi) Generally every consumer behaves according to this law.

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Explanation of the law of Demand:

Assuming all other factors as constant the law of demand states the relationship between price of the commodity and its quantity demanded. Hence, the law of demand can be expressed by the demand function as given below:-

$$D_x = f(P_x; \bar{P}_R, \bar{Y}, \bar{T}, \bar{W}, \bar{P})$$

D_x = Demand for x

P_x = Price of x

Y = Income of consumer

T = Tastes and Preferences

W = Wealth

P = Population

P_R = Price of related things.

Law of demand establish the relationship between Demand for a commodity x (D_x) and its price (P_x)

Other things like Y, T, W, P, P_R are kept constant, therefore a sign of bar (—) is put on these factors.

This shows all the factors other than price are kept constant and law of demand shows the effect of - Change in price only on the demand of a commodity.

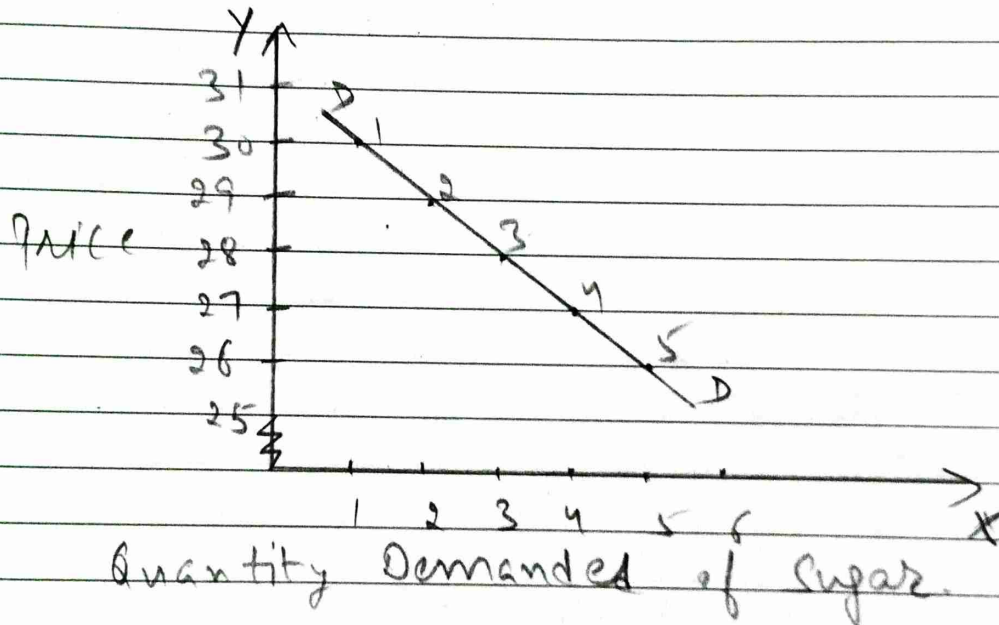
Law of demand can be explained with the help of a hypothetical demand schedule and a demand curve on the next page

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Hypothetical Individual Demand Schedule

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Price of Sugar ₹ (Per kg)	Quantity of Sugar Demanded (per month) (kg)
30	1
29	2
28	3
27	4
26	5

Demand Curve



The above figure shows that as the price of sugar goes down the quantity demanded of sugar goes up.

Causes of Operation of law of Demand's
(Why does demand curve slopes downward?)
(Why more is demanded at less price?)

(i) Law of Diminishing Marginal Utility:-

The law of diminishing marginal utility states that when an additional unit of

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A commodity is consumed, the marginal utility derived from it is declining, because of the reason that the earlier units of consumption have partly satisfied our wants. A rational consumer when every additional unit brings decreasing utility, the consumer would naturally prefer to buy this additional unit only at a lower price.

For example, when you eat one pizza the second will not give same satisfaction as you have derived after the consumption of 1st pizza. Therefore you will buy 2nd pizza only if it is available at lesser price. Therefore companies offer 50% discount on 2nd pizza not on 1st pizza.

- (2) Income Effect! - Income effect means effect of change in consumer's real income as a result of change in price of commodity on the demand of a commodity. Real income is income in terms of goods and services. It is basically purchasing power of money. When price of a commodity falls, consumer has to spend less in terms of money on purchase of same amount of goods and services. With the money saved, he can purchase more of the commodity. Thus demand rises with the fall in price.

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For example 'A' man has ₹100 and price of milk is ₹25. He can purchase 4 kg of milk in ₹100. When the price falls to ₹20 per kg, he can purchase 5 kg of milk in ₹100. Thus with ₹20 (100-80) saved, he can purchase one more kg of milk. Therefore demand rises with the fall in price due to rise in real income.

Note! Please don't write, "When the income (Money) of a consumer changes". because it is wrong because we have assumed income of consumer is constant. It is only real income that changes not the money income.

(3) Substitution Effect - Substitution effect means substitution of cheaper goods for costlier one. This can be explained with the help of an example. Suppose Tea is main product and coffee is its substitute. When the price of tea rises, it becomes costlier in comparison to coffee and people will shift to coffee and demand for tea will fall. On the other hand when price of tea falls, it will become cheaper as compared to coffee and people will shift from coffee to tea. Demand for tea will rise. Thus demand rises with the fall in price and falls with a rise in price.

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4. Number of Consumers:-

As the price falls, new consumers start purchasing the commodity and who were earlier purchasing it will ~~start~~ start buying in large quantity. Thus demand rises with a fall in price.

For example at a price of ₹ 100 per kg only A is buying mangoes (1 kg). As the price falls to ₹ 80 per kg, B also started purchasing and A who was earlier purchasing 1 kg at ₹ 100 per kg now purchased 2 kg. So when prices start falling new consumers are adding and old consumers start purchasing in large quantity.

5. Number of Uses:-

Some commodities have many uses. ~~When~~ for example milk. When the price falls people will start making butter, ghee, lassi, sweets, shakes etc. As a result demand will rise. So demand rises with the fall in price.

And when the price rises people will use milk only for important purposes like children and old persons. Therefore demand falls.

Thus we can say demand rises with a fall in price and ~~falls~~ falls with a rise in price.

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Exceptions to law of demand

[Conditions in which law of demand does not apply i.e. Demand rises with increase in price and demand decreases with a fall in price].

Why does demand curve slopes upward?

- (1) Giffen Goods: Giffen goods refer to those goods on which a consumer spend a very large part of his income. A fall in the price of such goods may not increase its demand because consumers start diverting their extra purchasing power to buy superior commodities. Consequently, demand for such goods falls. These goods are inferior from the consumer's view point.

Demand falls with a fall in price, so law of demand does not apply.

- (2) Articles of Distinction: The law of demand does not apply in case of articles of distinction such as diamond jewellery, luxury car etc. Demand for such products is high when the price is high. A ~~man~~ fall in their price may lead the rich people to buy less because now rich man's desire for distinction is not satisfied. For example if the price of Audi car reduced to 2

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2. Slab or 7 lakh, rich people will not buy it because it will not match their status.

(3) Ignorance - If consumers are ignorant about the quality of the commodity, the law will not apply. In such cases, consumers would judge the quality of the commodity from its price. They think high priced goods are of better quality and low priced goods are of poor quality. So when the price falls demand falls.

(4) Loss of faith in quality - When people have no faith in the quality of the product, the law will not apply. Any fall in the price of the commodity will not increase the demand as people don't have faith in quality. So price falls demand also falls. Law of demand does not apply.

(5) Future Expectation regarding Price -

When consumers expect a fall in the price of the commodity in near future, they will not buy in present even at low price. Thus demand will not rise with a fall in price. Similarly, if the consumers expect a hike in the price of the commodity in future, they will ~~purchase~~ increase their

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demand even at high price. Thus demand does not fall with a rise in price. Thus demand law of demand does not apply.

Inferior Goods:-

Inferior goods are those low quality goods whose demand falls as the income of the consumer increases because the consumer would prefer to buy better quality product with his increased income.

Giffen Good:- Giffen goods are those poor quality goods whose demand falls with the fall in price of the goods because consumer would like to buy better quality goods with the money saved.

Note! Inferior goods are also explained with income of consumer and giffen goods are explained with their price.

Answer the following questions!

1. Using hypothetical data show a market demand schedule.
2. State the law of demand.
3. Explain any two exceptions to law of demand.
4. Explain any two causes responsible for operation of law of demand.

Changes In Demand:-

Demand for any commodity depends on several factors like price of the commodity, price of related goods, income of the consumers, Taste and preferences, population, weather etc.

WE will group all these factors into two categories

(i) Price

(ii) Factors other than Price

On the basis of such classification we shall discuss two types of Changes in Demand.

(1) Change in Quantity Demanded:-

When the demand of any commodity changes due to change in price other things being equal, it is known as change in quantity demanded. In this case change in demand is shown along the same demand curve through two different points.

It has two types.

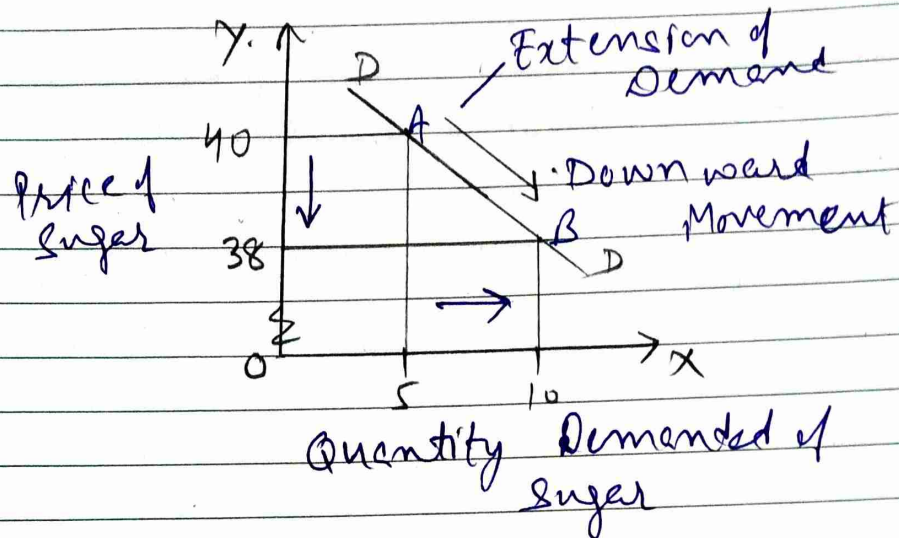
(i) Extension of Demand:-

When demand rises due to fall in the price of the commodity other things remaining same, it is known as ~~change~~ Extension of Demand.

(12)

Extension of Demand
Price of Sugar Quantity Demanded

40	5 kg
38	10 kg.

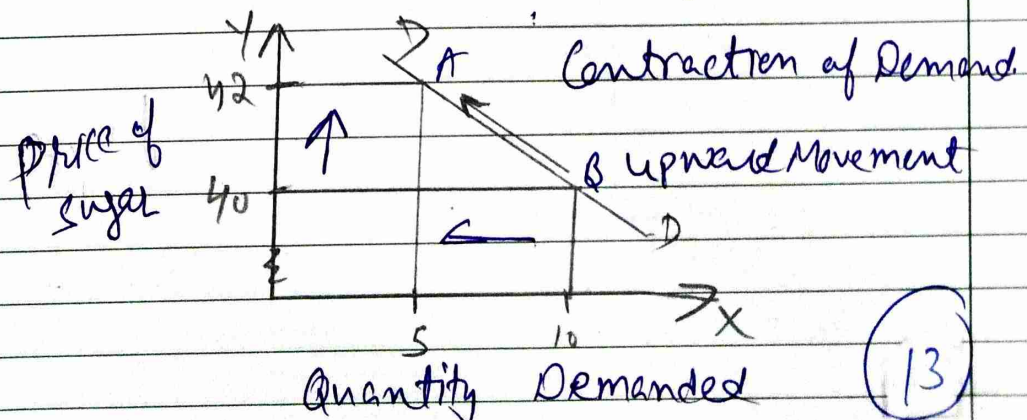


(ii) Contraction of Demand:

When demand of a commodity falls due to rise in price of the commodity other things remaining same, it is known as Contraction of Demand.

Price of Sugar Quantity Demanded

40	10 kg
42	5 kg.



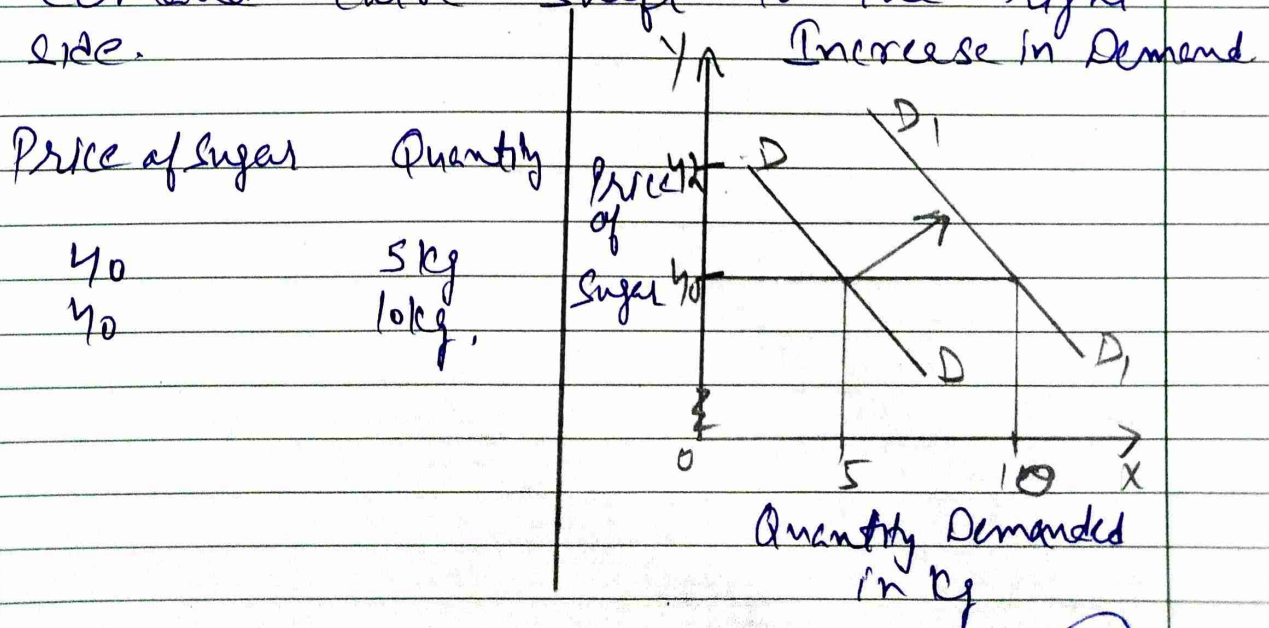
In case of change in quantity demanded, demand curve does not shift from its place. There is only ~~upward~~ upward movement (in contraction) and downward movement (in extension).

(2) Change in Demand.

When demand of a commodity changes due to change in other things (income of consumer, taste and preferences, price of related goods etc.) price remaining same is called Change in Demand. In this, demand curve shift from its place. It has two types

(A) Increase in Demand

When demand increases due to change in other things, price remaining same, it is known as Increase in Demand. In this case demand curve shift to the right side.



In this figure, demand curve DD shift to the right side D_1D_2 .

Causes of Increase in Demand:-

(i) Fall in Price of Complementary Goods:-
With the fall in price of car, demand for petrol will rise, price of petrol remaining same.

(ii) Rise in Price of Substitute Goods:-
When the price of substitute goods increases demand for main product rises. For example, when the price of coffee increases, demand for (substitute) tea (main product) will rise without any change in price of tea.

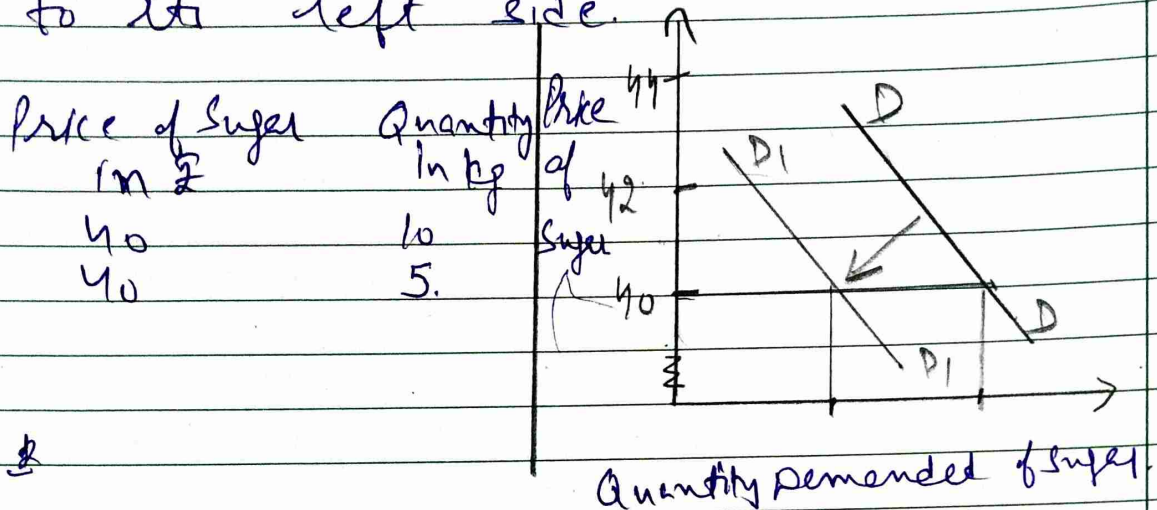
(iii) Increase in Income:- As the income of the consumer ^{increases}, demand for normal goods will increase price of the commodity remaining same.

(iv) Change in Tastes:- A rise in liking for a product will cause a rightward shift in the demand curve. Demand of commodity will rise at same price of the commodity.

(v) Change in Population:- With the increase in population demand will rise. With a birth of a child in a family will increase the demand for milk.

(B) Decrease in Demand!

When demand of a commodity decreases due to change in other things, price remaining same, it is known as Decrease in Demand. In this case demand curve shift to its left side.



In the above diagram it shows at same price of ₹ 40 demand for sugar decreases from 10 kg to 5 kg and demand curve shift from DD to its left side as D, D_1 .

Causes of Decrease in Demand!

(i) Rise in Price of Complementary Goods!
With the rise in price of the car, demand for petrol will fall, without any rise in price of petrol. Thus demand falls due to change in other things price remaining same.

(ii) Fall in Price of Substitute!
When the price of substitute falls, demand for main product

will fall. For example, when the price of coffee (substitute) falls, demand for tea (main product) will also fall as people would prefer to coffee as it becomes cheaper now. So demand for ~~tea~~ tea falls without any change in price of tea.

(iii) Fall in Income of Consumer! With the fall in income of the consumer demand for normal goods will fall at same price.

(iv) Change in Tastes! A decline in the liking of the ~~the~~ product will decrease the demand for the product. If you start disliking pizza, the demand for pizza will fall even if the price of pizza is low.

(v) Decrease in Population! Any decrease in population will ~~de~~ result in decrease in the demand for a commodity.

Difference between Extension of Demand and Increase in Demand.

Refer to Page 63.

Difference between Contraction of Demand and Decrease in Demand.

Refer to Page 64.

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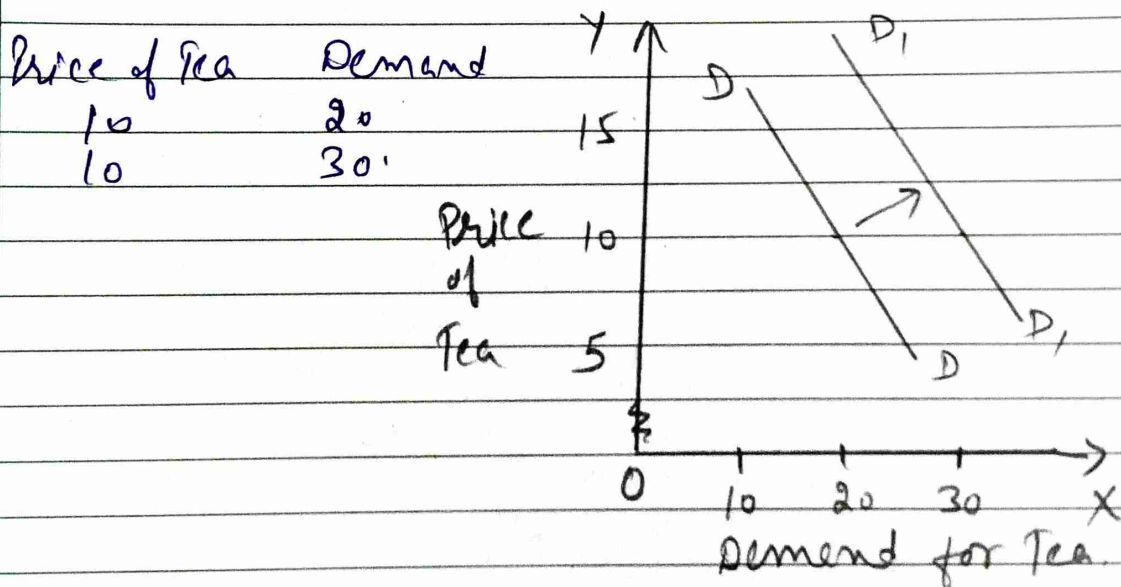
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Show the effect of change in price of related Goods.

Related Goods include substitute goods and Complementary goods.

Let's first discuss effect of rise in price of substitute (coffee) on the demand of main product (tea).

Ans. When the price of ~~tea~~ coffee increase tea becomes cheaper as compared to coffee and people will shift from coffee to tea and demand for tea will increase.



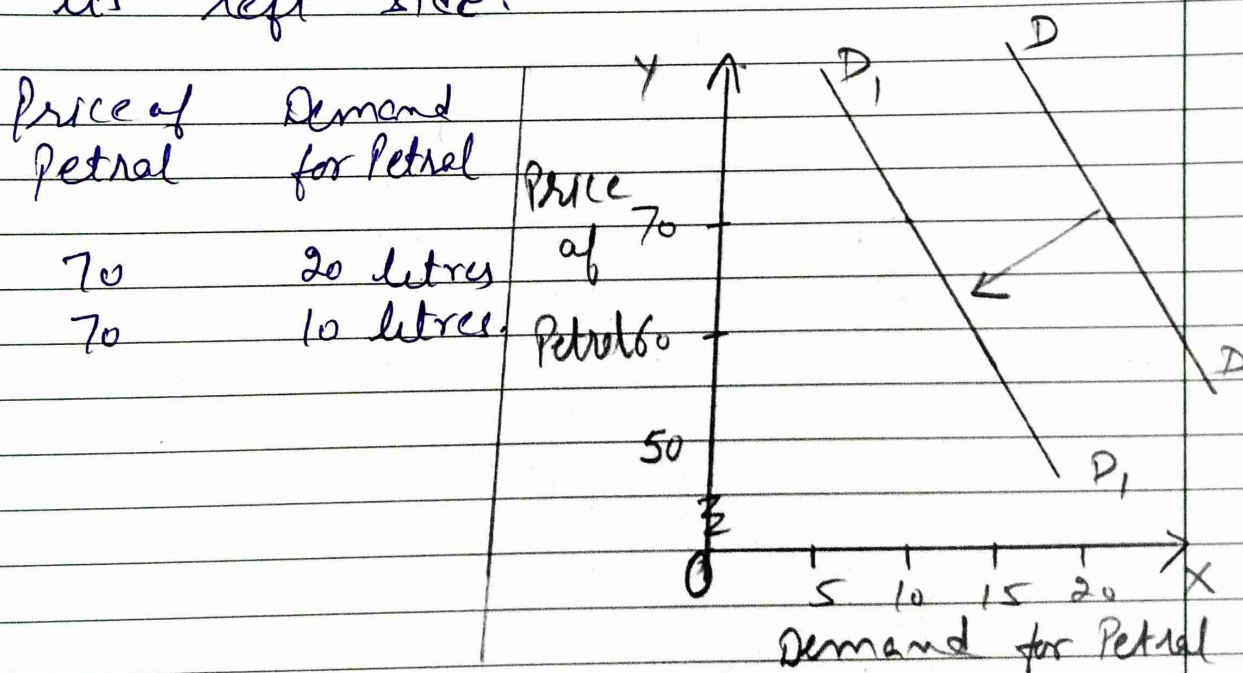
In case demand for tea rise due to change in price of coffee, price of tea remaining same, it is termed as 'Increase in Demand' as demand curve shifts to right side.

Note. Write Price of Tea on Y axis and Demand for tea on X-axis. Don't write price of coffee on Y axis.

Show the effect of rise in price of car on demand for petrol. Complementary Goods.

Ans. When the price of car increases it becomes costly the demand for car will decrease. As a result demand for petrol will also decrease at same price of petrol.

As demand for petrol decreases due to change in other things price remaining same, it is termed as 'Decrease in Demand' and demand curve will shift towards its left side.



Demand Curve DD will shift to its left to D_1D_1 , as demand for petrol decreases due to change in other things price of petrol remaining same.

Answer the following questions:-

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- (1) What is Increase in Demand?
- (2) Explain any two causes of decrease in demand.
- (3) What is Contraction of Demand?
- (4) Explain the difference between Extension of Demand and Increase in Demand.

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