

5 DEMAND

OVERVIEW

1. Demand tells how much of a good a consumer is willing and able to purchase at each price.
2. Demand and quantity demanded are different. The quantity demanded refers to the quantity the consumer is willing and able to buy at a particular price.
3. The law of demand states that there is an inverse relation between the price and the quantity demanded. The income and substitution effects for a change in price support the law of demand.
4. Movements along the demand curve are caused only by a change in the price of a good.
5. The demand curve shifts only if a determinant of demand changes. The determinants of demand are taste, income, the price of related goods, and the expectation of a change in price.
6. Two goods are substitutes if one good can be used in place of the other. If the price of a good goes up, the quantity demanded goes down and the demand for a substitute goes up.
7. Two goods are complements if they are used together. If the price of a good goes up, the quantity demanded goes down and the demand for the complement also goes down.

MATCHING

- | | | | |
|-----------|-----------------------------|----|---|
| _____ 1. | demand | a. | when two goods are used together |
| _____ 2. | quantity demanded | b. | when one good can be used instead of another good |
| _____ 3. | law of demand | c. | demand increases when income increases |
| _____ 4. | substitution effect | d. | demand decreases when income increases |
| _____ 5. | income effect | e. | the only effect on a buyer of a change in price |
| _____ 6. | determinants of demand | f. | factors that cause demand to change |
| _____ 7. | normal good | g. | price rises and quantity demanded falls |
| _____ 8. | inferior good | h. | the impact of a change in any demand determinant |
| _____ 9. | complements | i. | the quantity of a good a buyer is willing and able to buy at each price, all else held constant |
| _____ 10. | substitutes | j. | the impact on quantity demanded due to a change in price due to substitution |
| _____ 11. | change in quantity demanded | k. | the impact on the quantity demanded due to a change in price because the purchasing power of income is affected |
| _____ 12. | change in demand | l. | the amount consumers are willing and able to buy at a specific price |

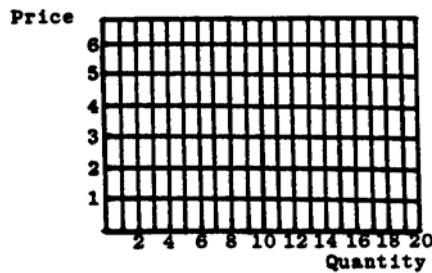
TRUE-FALSE

- _____ 1. If price changes, then demand changes.
- _____ 2. If there is an increase in income, then demand always increases.
- _____ 3. When the price of a good rises, then the demand for its complement also rises.
- _____ 4. A movement along demand is caused by a change in one of the determinants of demand.
- _____ 5. For an inferior good, when income rises, the quantity demanded falls.

PROBLEMS

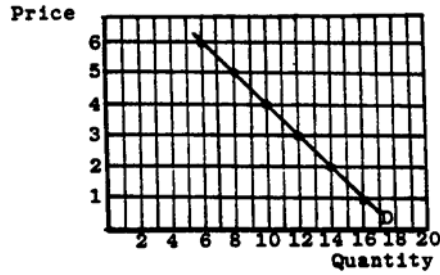
1. a. Plot each price and quantity pair from the table and connect the points to form a demand curve.

<u>Price</u>	<u>Quantity</u>
\$6	6
\$5	8
\$4	10
\$3	12
\$2	14
\$1	16



- b. As price rises, what happens to the quantity demanded? _____
- c. As price falls, what happens to the quantity demanded? _____
- d. At a price of \$4, how many units are demanded? _____
- e. Is demand an example of a direct, inverse, or constant relation? _____
2. Suppose that a change in taste occurs. The new demand is shown by the following table.

Price	Quantity
\$6	8
\$5	10
\$4	12
\$3	14
\$2	16
\$1	18



a. The graph from problem 1 is reproduced here. Plot the new points on it. What has happened to the demand curve?

b. What caused the demand curve to shift?

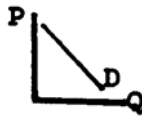
c. Did demand increase or decrease? _____

d. To show a decrease in demand you would:

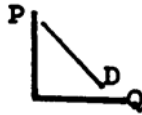
e. To show a decrease in the quantity demanded you would:

3. Illustrate:

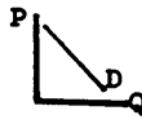
a. an increase in demand.



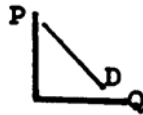
b. a decrease in demand.



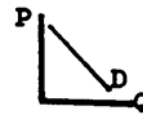
c. an increase in the quantity demanded.



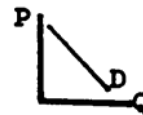
d. a decrease in the quantity demanded.



e. what happens to demand for the good if the price of a substitute rises.



f. what happens to demand for the good if the price of a complement rises.



4. Fill in the blank with Qd if the quantity demanded of ; i;r bread changes and D if the demand curve for bread shifts .

- a. The price of bread rises. _____
- b. The consumer's income changes. _____
- c. Bread becomes more important in the diet. _____
- d. Bread consumption is linked with obesity. _____
- e. The price of bread falls. _____
- f. The price of rolls increases. _____
- g. The price of butter falls. _____
- h. The price of bread is expected to rise. _____
- i. The government lowers the price of bread. _____
- j. The price of jam rises. _____

5. Fill in the blank with demand or quantity demanded.

- a. When the price of peanut butter rises, the _____ for peanut butter will fall.
- b. Tickets for Olympic events are hard to get. The price should be increased to reduce the _____.
- c. The _____ for tickets increases with a winning football team.
- d. When the price of beef goes up, there is an increase in the _____ for chicken.
- e. The price of hotdogs is going up. The _____ for hotdog buns will certainly fall.

IN THE NEWS

1. Builders are reporting an increase in demand for housing. Lower interest rates are indicated as a major factor. The lower interest rates make a home more affordable to more people. There is also a large backlog of demand from families that put their money into savings during the period of high interest rates. The ability to buy has created some of the demand according to local contractors.

- a. The demand for what good is being discussed?

- b. Will lower interest rates increase demand for housing?

c How does this piece show both the effects of a change in demand and change in quantity demanded? _____

2. Cigarette consumption is falling. Some analysts argue¹ that the decline in cigarette consumption is due to consumer awareness of the health impacts of smoking. The tobacco industry notes that the decline in sales coincides with a doubling of the federal cigarette tax. Because of the decline in consumption, cigarette advertising has increased substantially. Industry advertising attempts to connect smoking to economic and social success and healthy activities.

a. Is this piece about a change in demand? Why or why not?

b. Is this piece about a change in the quantity demanded? Why or why not?

3. Avocados have long been promoted as a healthful and exotic food. Despite its growing popularity, plentiful crops of avocados have prompted growers to find new uses for their product. Growers are debating whether to expand their market by advertising avocados as a dog food. Veterinarians say avocados are healthful and dogs are eager avocado eaters. But the suggestion leaves some growers unhappy. They are concerned that human consumption will fall once people realize that avocados are also a dog food. Somehow, avocados will not seem so glamorous anymore, and the avocado business might really go to the dogs.¹

Is this a piece about a movement along demand or a movement of the demand curve? Explain.

4. Toy sales are subject to fads. He-Man, a recent top seller, now hardly sells at all. Even the Cabbage Patch doll seems to be losing its market position. Barbie and Legos are still strong sellers while the sales of Trivial Pursuit seem to be falling off. You can tell when a toy is past its prime when you can readily find the toy on the shelf at a discount.

a. The demand for what good is being discussed?

¹ Adapted from "Avocado Industry Debates Prospect of Expanding Production to Dog Food," by Terrance W. McGarry, United Press International, as reported in the *Bowling Green Daily Sentinel-Tribune*, Jan. 18, 1982.

b. Where do you see a discussion of shifts in demand?

c. Where do you see a discussion of movements along demand?

5. Some marketers have discovered that the daily weather can change people's habits and taste preferences for a product. Soft drink consumption goes up the harder the wind blows. Cold spells and winter storm warnings increase consumption of soup and hot cereals. To stretch the advertising dollar, it is no longer just a matter of promoting snow blowers in the winter and suntan oil in the summer. Weather reports can help determine the best time to run ads.²

a. What impact does the weather have on demand?

b. What impact does the weather have on the quantity demanded?

c. If you were deciding when to run an ad, would you pay attention to the weather? Do you think that the increase in demand occurs because of the weather or the advertising?

PRACTICE TEST

Circle the correct answer.

1. Demand:
 - a. is the amount a consumer wants.
 - b. is what the consumer is willing and able to buy at each price.
 - c. increases as the price goes up.
 - d. changes as the price of the good changes.

2. Which of the following incorrectly states the law of demand?
 - a. As price rises, the quantity demanded falls.
 - b. As price falls, the quantity demanded rises.
 - c. As price rises, the consumer buys less.
 - d. None of the above.

² Adapted from "Companies Look to Weather to Find Best Climate for Ads" by Ronald Alsop as reported in *The Wall Street Journal*, Jan. 10, 1985.

3. Which of the following changes as we move along the demand curve?
 - a. Income
 - b. Consumer taste
 - c. The prices of all other goods
 - d. The price of the good

4. The statement "A change in demand is caused by a change in the price of the good." is:
 - a. always true.
 - b. usually true.
 - c. sometimes true.
 - d. always false.

5. If hot dogs and hot dog buns are complements, and the price of hot dogs goes up, you would expect the demand for hot dog buns to:
 - a. not change.
 - b. increase.
 - c. decrease.
 - d. not enough information.

ANSWERS
Problems

Answers – Demand

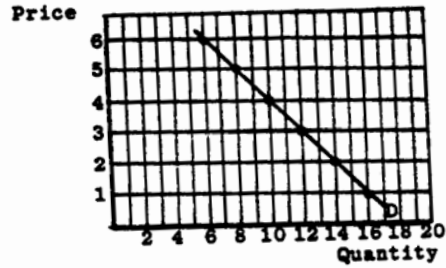
Matching

1. i
2. l
3. g
4. j
5. k
6. f
7. c
8. d
9. a
10. b
11. e
12. h

True-False

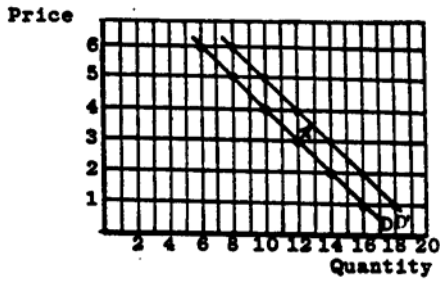
1. F
2. F
3. F
4. F
5. F

1. a.



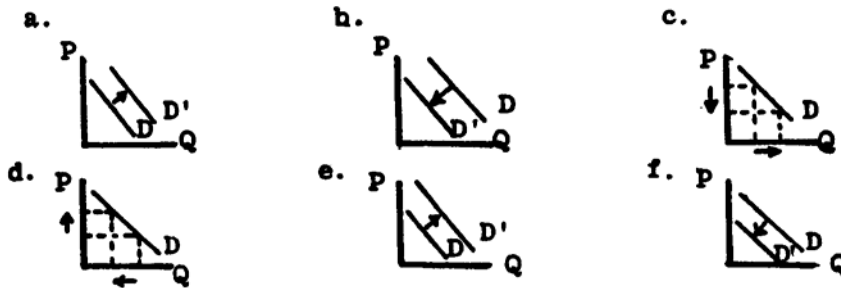
- b. The quantity demanded falls.
- c. The quantity demanded rises.
- d. Ten units are demanded at the price of \$4 each.
- e. Demand is an inverse relation between price and quantity demanded.

2. a. Demand shifted.



- b. Demand shifts if there is a change in taste.
- c. Demand increased.
- d. Make the demand move to the left.
- e. Move up the demand curve.

3.



4. a. Qd, b. D, c. D, d. D, e. Qd, f.D, g.D, h.D, i.Qd, j. D

5. a. quantity demanded

- b. quantity demanded
- c. demand
- d. demand
- e. demand

In the News

1.
 - a. The demand for housing is discussed in this reading.
 - b. A change in price does not change demand.
 - c. The demand for housing has increased when the ability to buy increased through more savings. As the price of housing changes, the quantity of housing people want also changes. The quantity demanded of housing increases when lower interest rates lower the price of housing.
2.
 - a. It is about both the change in demand and the change in quantity demanded. The discussions of advertising and the consumer concern for health are about attempts to change taste and changes in taste. This would cause a change in demand.
 - b. The discussion of the change in price due to the tax is a change in quantity demanded.
3.
 - a. The growers want us to buy more avocados at each price. Thus they are interested in a change in demand. The question for the growers is whether promoting avocados for dog food will result in an overall increase or decrease in demand. 4.a. The demand for toys is being discussed.
 - b. The discussion of the fads is about shifts in demand due to changes in taste. The decreases in demand for Cabbage Patch dolls and Trivial Pursuit are examples.
 - c. The fact that the toys are being sold at a discount means that the quantity demanded is being discussed. The price of these goods is being lowered to encourage buyers to buy more.
5.
 - a. The weather seems to cause a change in the demand by changing the buyer's taste for the product.
 - b. The weather has no impact on the quantity demanded. The weather causes the demand to shift but it does not cause movements along the demand curve.
 - c. This question asks what the cause is of the increase in demand. Does demand increase because of the increase in advertising or because of the change in the weather? It may be desirable to advertise more if it is the advertising, not the weather, that is causing the demand curve to shift.

Practice Test

1.b., 2.d., 3.d., 4.d., 5.c.