

# Engineering Economics

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# **Lecture 2**

## **Market**

# The Market Forces of Supply and Demand

## ❑ Demand

- The *quantity demanded* of any good is the amount of the good that buyers are willing and able to purchase.
- Demand is the representation of the various amounts of a product that consumers are willing and able to purchase at each of a series of possible prices during a specific period of time.
- To be a demand for a commodity, you should
  - ❑ want it
  - ❑ afford it
  - ❑ plan to buy it

# The Market Forces of Supply and Demand

## ❑ Law of Demand

- *The law of demand* states that other things being equal, when the price of a good rises, the quantity demanded of the good falls, and when the price falls, the quantity demanded rises.
- When the price of a commodity is raised, other things remain constant, buyer tend to buy less of the commodity and vice versa.

# The Market Forces of Supply and Demand

## ❑ Demand Schedule

- ***Demand Schedule*** is a table that shows the relationship between the price of a good and the quantity demanded of that good.

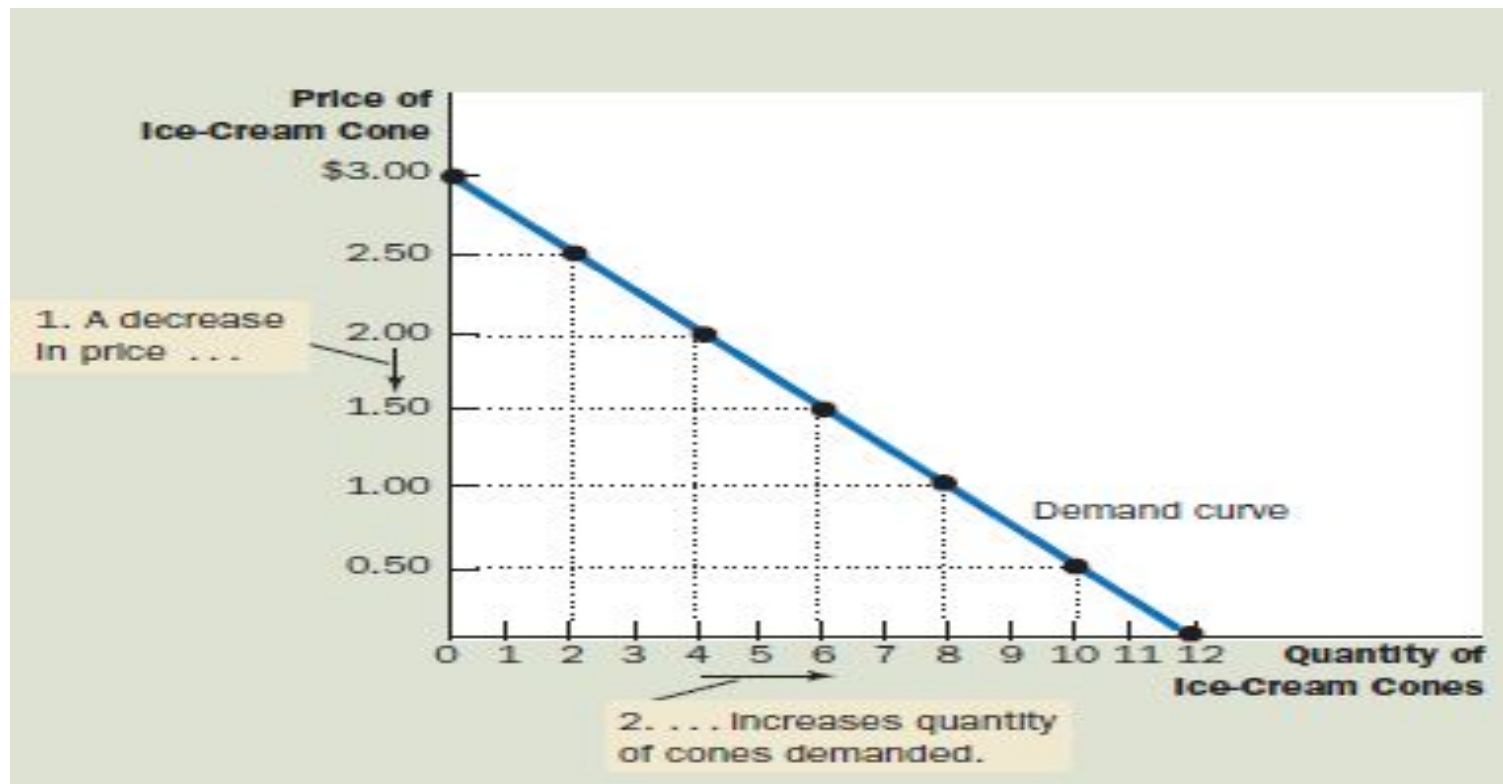
Catherine's Demand Schedule and Demand Curve

Price of Ice-Cream Cone	Quantity of Cones Demanded
\$0.00	12 cones
0.50	10
1.00	8
1.50	6
2.00	4
2.50	2
3.00	0

# The Market Forces of Supply and Demand

## ❑ Demand Curve

- *Demand curve* is a graph that shows the relationship between the price of a good and the quantity demanded



# The Market Forces of Supply and Demand

## Determinants of Demand

- What factors determine how much ice cream will a consumer buy?

*Movement  
Factor*

➤ Price of the good itself

*Shift Factors*

➤ Income of the consumer – Normal goods & Inferior goods  
➤ Price of other goods - Complements & Substitutes  
➤ Tastes and preferences  
➤ Expectations of future prices  
➤ Expectations of future Income  
➤ Number of Buyers

# The Market Forces of Supply and Demand

## ❑ Determinants of Demand

- Table 1 lists the variables that influence how much consumers choose to buy of a good.

TABLE 1

Variable	A Change in This Variable ...
Price of the good itself	Represents a movement along the demand curve
Income	Shifts the demand curve
Prices of related goods	Shifts the demand curve
Tastes	Shifts the demand curve
Expectations	Shifts the demand curve
Number of buyers	Shifts the demand curve

### Variables That Influence Buyers

This table lists the variables that affect how much consumers choose to buy of any good. Notice the special role that the price of the good plays: A change in the good's price represents a movement along the demand curve, whereas a change in one of the other variables shifts the demand curve.



# The Market Forces of Supply and Demand

## Demand Function

- A demand function is a mathematical relationship between quantity demanded (dependent variable) and the determinants of demand (independent variables).

- Say,  $Q_d = f(P)$

Where  $Q_d$  = Quantity demanded and  $P$  = Price of a good.

$$\text{Example: } Q_d = a - bP$$

$$Q_d = 20 - 4P$$

Where,  $a$  = *Autonomous demand* and  $b$  = *Slope coefficient*

# The Market Forces of Supply and Demand

## Demand Function

Example:  $Q_d = 20 - 4P$

### ➤ Demand Schedule from a Demand Function

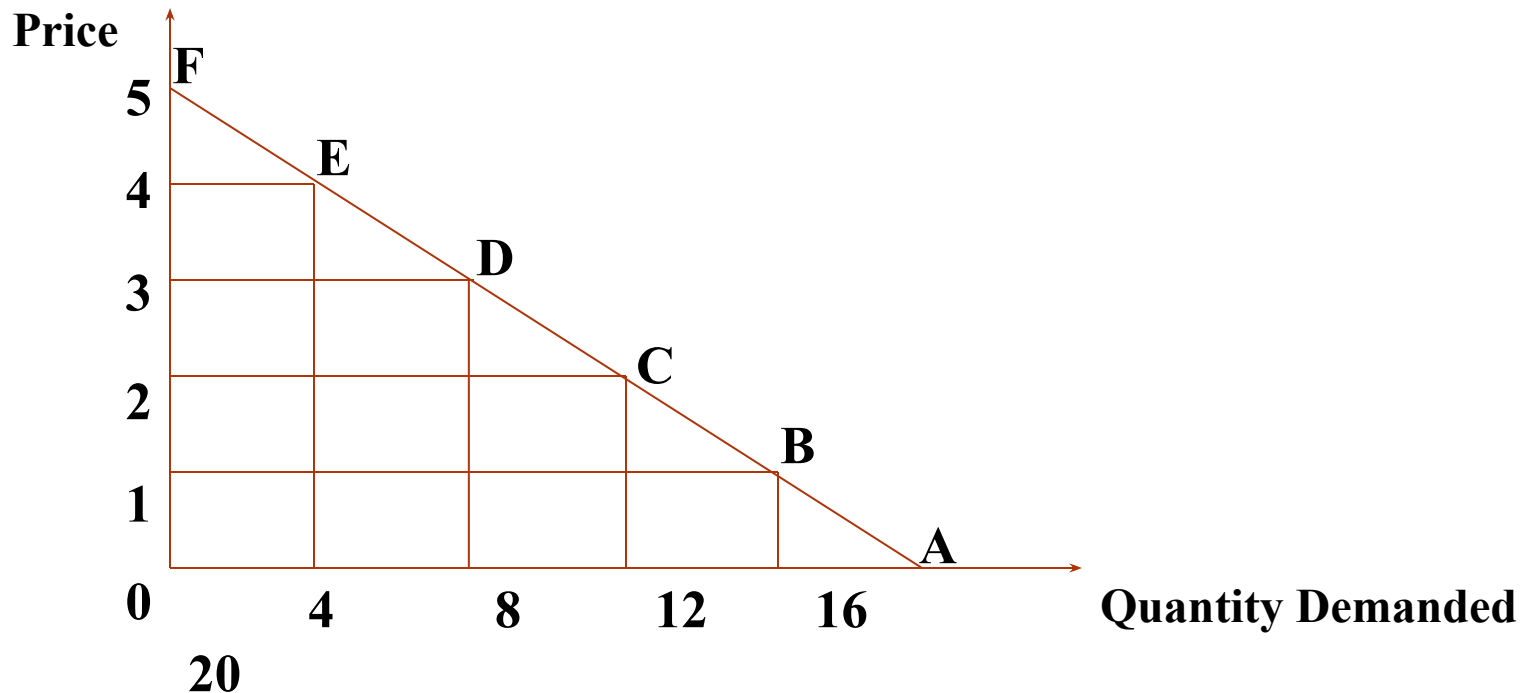
		Coordinate
0	20	A
1	16	B
2	12	C
3	8	D
4	4	E
5	0	F

# The Market Forces of Supply and Demand

## Demand Function

Example:  $Q_d = 20 - 4P$

### ➤ Demand Curve from a Demand Function



# Readings

- ❑ **N. G. Mankiw- Principles of Microeconomics, 5th Edition, Chapter – 4.**
- ❑ **Michael Parkin - Microeconomics, 10th Edition (Pearson Series in Economics) - Prentice Hall (2011), Chapter – 3.**



**Thank You**