

DUE DATE: _____

NAME: _____

CHAPTERS 4-5: DEMAND AND SUPPLY WORKSHEET

Topics

*Demand, Elasticity of Demand, Determinates of Demand,
Supply, Elasticity of Supply, Costs, Determinates of Supply*

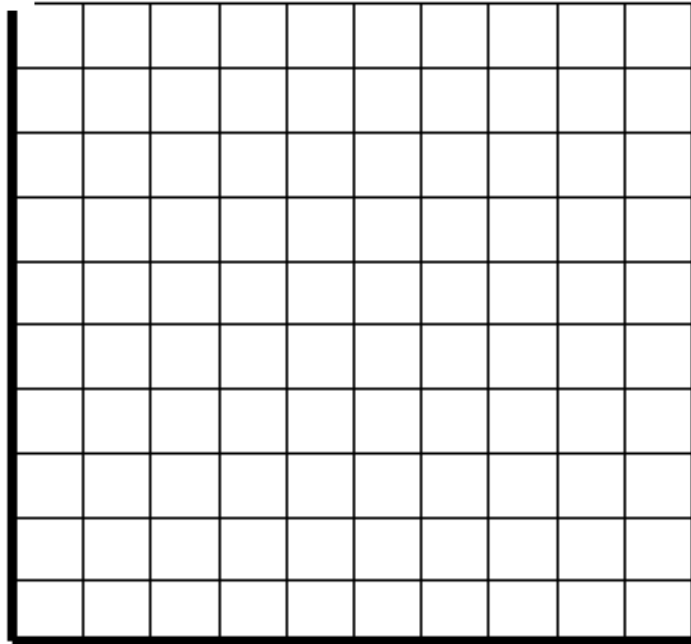
1. Kobe's favorite drink is cola. He buys a 12 pack from his local supermarket and has noticed that the price often varies. His monthly demand for cola is shown below: From the information provided in the demand schedule, draw a labeled demand curve below.

Use the graph space to draw the curve. Label the demand curve D1.

Kobe's Weekly Demand for Cola	
Price (\$)	Quantity Demanded
5.00	2
4.50	3
4.00	4
3.50	5
2.50	6



\$



Q

2. Kobe's drinks cola drinks to give him energy - he loves Dr. Pepper, but sometimes Mr. Pibb (a substitute good for Dr. Pepper) is on special sale. Given the lower price for Mr. Pibb, a new demand schedule had to be created for Dr. Pepper.

Use the graph space ABOVE you created in Question #1 to draw the new demand curve. Label the new demand curve D2.

DEMAND SCHEDULE

<u>PRICE FOR DR. PEPPER</u>	<u>OLD DEMAND</u>	<u>NEW DEMAND</u>
\$5.00	2	1
\$4.50	3	2
\$4.00	4	3
\$3.50	5	4
\$2.50	6	5

3. From the information shown on figure 1 below, construct a demand schedule showing Kobe's monthly demand for Dr. Pepper.

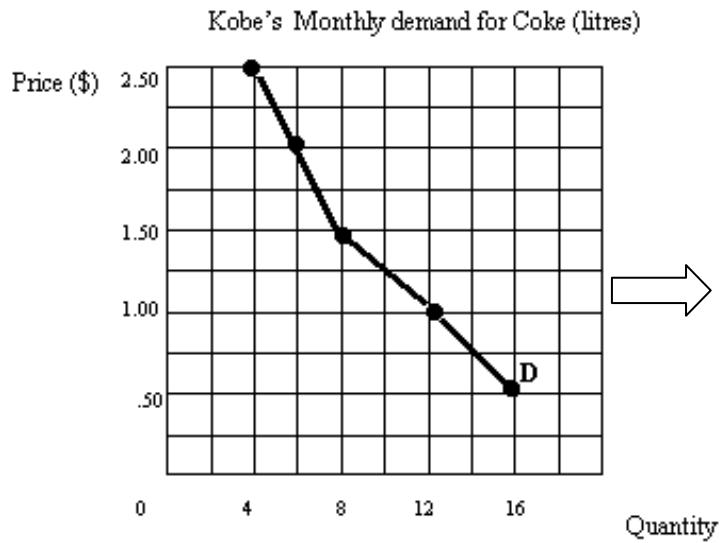


Fig 1.

Kobe's Weekly Demand for Cola

Price (\$)	Quantity Demanded

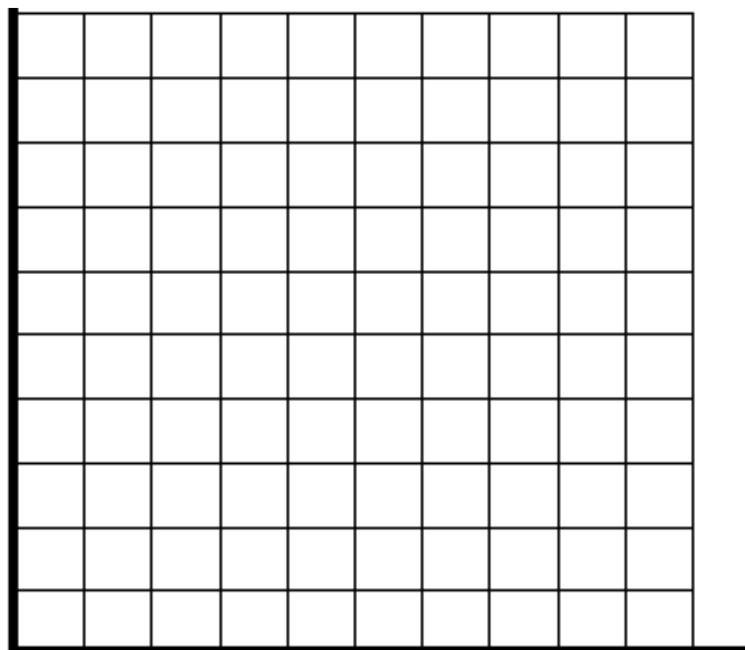
4. The word **marginal** means _____.

5. Another term used to refer to a product's **usefulness** or a consumer's **happiness** with the product is....

6. When a consumer stops consuming a product/service due to lack of utility this is referred to as the law of _____.

7. Draw the Law of Diminishing Marginal Utility below.

Utility
(usefulness)



**Quantity of Product
or Service
Consumed**

8. An Elasticity of 1.0 of greater = _____ demand

9. An Elasticity of between 0 and 1.0 = _____ demand

10. Use the Elasticity formula to calculate values of Elasticity for all the situations below. Change negatives to positives.

$$E_d = \left| \frac{\% \text{ change in quantity demanded of product X}}{\% \text{ change in price of product X}} \right| = \frac{\Delta Q_d / Q_d}{\Delta P_d / P_d}$$

STEP 1: The formula used to calculate the percentage change in quantity demanded is:
| [QDemand(NEW) - QDemand(OLD)] ÷ QDemand(OLD) |

STEP 2: The formula used to calculate the percentage change in price is:
| [Price(NEW) - Price(OLD)] ÷ Price(OLD) |

STEP 3: (STEP 1) ÷ (STEP 2)

Price		Quantity		STEP 1 % change in quantity demanded	STEP 2 % change in price	STEP 3 Price Elasticity of Demand
Initial	New	Initial	New			
25	30	100	40			1. _____
40	70	120	90			2. _____
200	220	80	64			3. _____
50	75	150	135			4. _____

In each case identify whether you would describe it as **elastic** / **unit elastic** / **inelastic**

1. _____

2. _____

3. _____

4. _____

11. What happens to the Elasticity of Demand if there are **many** substitutes for a good: Is it **elastic** or **inelastic**?

12. Given the data below, calculate the price elasticity of demand when the price changes from \$9.00 to \$10.00.

Data for Good X	
Price (\$)	Quantity Demanded
7.00	200
8.00	180
9.00	150
10.00	110
11.00	60

ANSWER: _____
 CHANGE ALL NEGATIVE NUMBERS TO POSITIVES

13. Is the demand for Good X is _____ between \$9 and \$10? *Circle One*

ELASTIC

INELASTIC

14. What type of demand would there be for a good that had **NO** substitutes? *Circle One*

ELASTIC

INELASTIC

15. Why do suppliers want to create more inelastic demand relationships in the products that they sell?

16. The elasticity of demand is **more** sensitive in the _____ because consumers have more time to adjust to the new price. *Circle One*

LONG-RUN

SHORT-RUN

17. Which way would the demand curve of Good X shift if the price of Good Y (a **complementary** good) increased? *Circle One*

LEFT

RIGHT

18. What happens to the Demand Curve of a Good X if the price of Good Y (a **substitute** good) **increases**? Explain **why** the demand curve for Good X changed?

LEFT

RIGHT

19. Which way would the demand curve for Good X (an **inferior** good) shift if your income **increased**? *Circle One*

LEFT

RIGHT

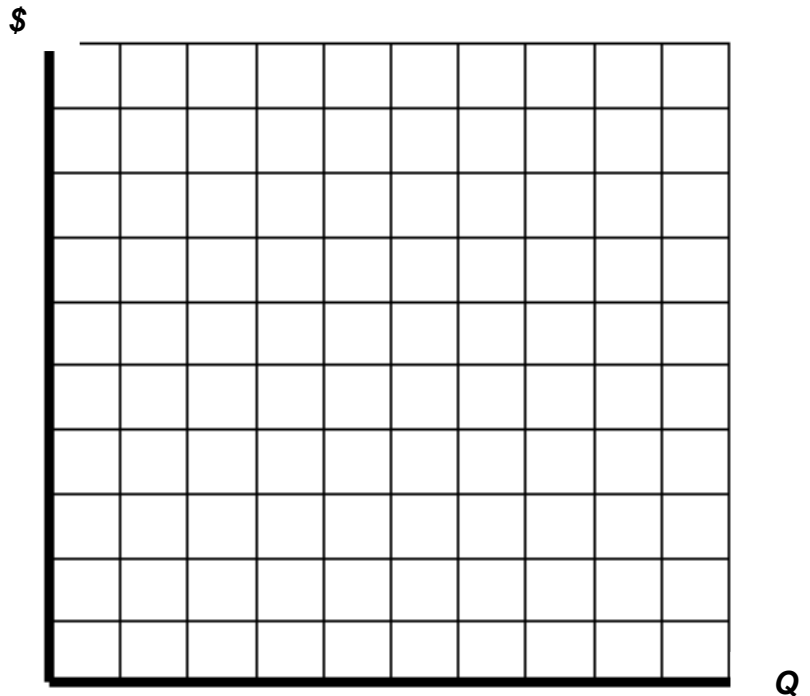
20. In the following scenarios describe if there is a shift to a demand curve for Good X (a superior good) and state which way the curve will shift (**Left, Right, or Stays the Same**)

- a) an increase in price for Good X a. _____
- b) a fall in customer's income b. _____
- c) an increase in the price of a substitute good c. _____
- d) a decrease in the price of a complement good d. _____

21. Coke's motivation to produce its drink varies based on price of the soda in the marketplace. From the information provided in the supply schedule, draw a labeled supply curve below.

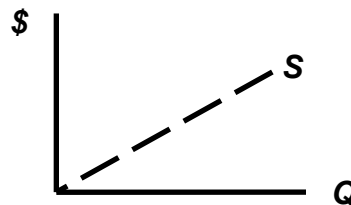
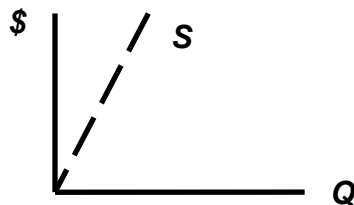
Use the graph space to draw the curve. Label the supply curve S1.

Coke's Daily Production of Cola	
Price (\$)	Quantity Supplied
1.40	9
1.30	9
1.20	8
1.00	6
.75	4
.50	2
.20	0



22. When a producer experiences a situation where each additional input in the production process begin to result in less products produced they are being affected by the law of _____.

23. Which of the below supply curves illustrates that the company is more willing and able to produce much more product when the price increase slightly? *Circle One*



24. What type of supply would there be for a good that is **cheap** for a company to produce? *Circle One*

ELASTIC

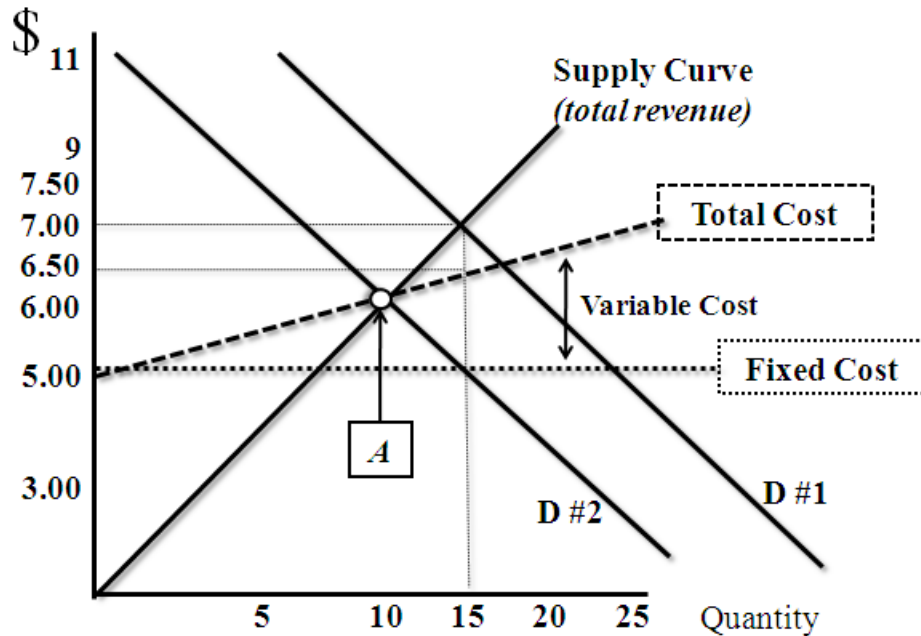
INELASTIC

25. Generally, only the _____ costs concern companies since these costs can be somewhat controlled **based on production**. *Circle One*

VARIABLE

FIXED

26. Use the graph and data below to answer the following questions:



1. Point A on the above curve is the break-even point. This is where the Total Revenue curve intersects the Total _____ curve.
2. If this company produces 15 units, what is the **cost per unit**? \$ _____
3. If demand is positioned at “D #1”, then the company will sell _____ units and make a **total profit** of \$ _____.

27. In the following scenarios describe if there is a shift to a supply curve for Good X and state which way the curve will shift (**Left, Right, or Stays the Same**)

- | | |
|---|----------|
| a) an increase in the cost to produce Good X | a. _____ |
| b) decrease in the price of Good X | b. _____ |
| c) an increase in the market price of a good that shares the same resources | c. _____ |
| d) an increased government subsidy used in production | d. _____ |

28. Supply and Marginal Cost Relationship:

Calculate total cost, average cost per unit, then marginal cost. Then based on the average cost per unit and the \$10 market price, calculate the profit per item for each quantity made. The first one has been done for you.

Output (Q)	Total Fixed Costs (TFC)	Total Variable Costs (TVC)	Total Cost	Average Cost Per Unit	Marginal Cost <i>(the change in Average cost after a change in output)</i>	MARKET PRICE
			(TC = TFC + TVC)	(AC = TC/Q)		\$10
0	200	0	\$200.00	\$0.00		PROFIT PER UNIT
50	200	100	\$300.00	\$6.00	\$6.00	\$4.00
100	200	180				
150	200	230				
200	200	260				
250	200	280				
300	200	290				
350	200	325				
400	200	400				
450	200	610				
500	200	890				

In our example, average cost per unit is minimized at a range of output between _____ and _____ units. Thereafter, because the marginal cost of production exceeds the previous average, the average cost rises. For example the marginal cost of extra units between 400 units and 450 units is _____ and the increase in output has the effect of raising the cost per unit from _____ to _____.

Therefore the Law of Diminishing Marginal Returns becomes present at an output of _____ units.