1. _____/20	4._____/30		
2. _____/20	5._____/10		
3. _____/10	6._____/10		
Total: _____/100			

Name: ____________________________

Team: ____________________________

Unit 2: Supply, Demand, and Consumer Choice
Problem Set #2

1. EXPLAIN an experience or example that shows the "real world" application of each of the following. Define the terms in your own words and use examples that clearly demonstrate your understanding of each concept.
    a. The Law of Demand and the Law of Supply (____/5)
    b. The Law of Diminishing Marginal Utility (____/5)
    c. Normal Goods and Inferior Goods (____/5)
    d. Consumer's Surplus and Producer's Surplus (____/5)

2. Supply and Demand Worksheets
    a. Complete the study guide entitled "Demand and Supply Study Guide" (____/5)
    b. Complete the worksheet entitled "Demand and Supply Practice" (____/15)

3. Government Intervention:
    a. Draw two separate graphs for a binding price ceiling and a binding price floor and show what happens to consumer surplus, producer surplus, and deadweight loss after the policy. (____/5)
    b. The government often uses excise taxes, called "sin taxes," to manipulate consumption of cigarettes. Draw and label the shift from a tax. Identify the new price consumers pay, the price producers receive, the amount of tax revenue consumers pay, and the amount of tax revenue producers pay. Lastly, EXPLAIN why it is unlikely that this tax will significantly reduce cigarette consumption. (____/5)

4. Practice FRQs: Applying S&D Analysis
    a. Practice FRQs. (____/20)
    b. Assume the following: The demand for all computers is price elastic. Laptop and desktop computers are substitutes. Laptops and DVD burners are compliments. Using three separate S&D graphs (laptops, desktops, and DVD burners) to show the impact of a change in technology that improves only the production of laptop computers on the following: (____/10)

i. Price of laptop computers ii. Output of laptop computers iii. Total revenue of laptop computer producers iv. Price of desktop computers	v. Output of desktop computers vi. Price of DVD burners vii. Output of DVD burners

5. Elasticity (_____/5)
    a. Give three reasons why the demand for some goods is elastic and others are inelastic. In your response, define elasticity and inelasticity and give examples of each. Lastly, EXPLAIN how the total revenue test can be used to determine if a demand curve is elastic or inelastic. Use two graphs with numerical examples in your response. (____/5)
    b. Explain the difference between cross-price elasticity of demand and income elasticity of demand. Explain the difference between positive and negative coefficient values for each. Lastly, EXPLAIN an example of a product with elastic supply and one with inelastic supply (_____/5)

6. Utility Maximization

You just won a $100 shopping spree at a store that sells only DVDs and CDs. You are trying to determine what combination of these two goods would maximize your utility. The price of CDs is $10 and DVDs are $20. Below is the total utility you receive from consuming these goods.

CDs	Total Utility
1	60
2	110
3	150
4	180
5	200
6	210

DVDs	Total Utility
1	160
2	300
3	420
4	520
5	600
6	660

a. Calculate the marginal utility and marginal utility per dollar for each unit of each good. (____/4)

b. If you only had $100, EXPLAIN how you determine the utility maximizing combination of CDs and DVDs? (____/3)

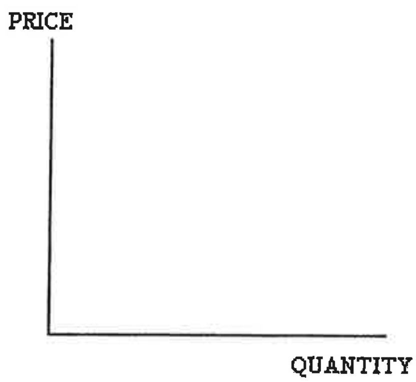
c. If your reward increased and your income constraint became $130, EXPLAIN how you determine the utility maximizing combination of CDs and DVDs? (____/3)

Demand and Supply Study Guide

Demand	Supply
Definition of Demand:	**Definition of Supply:**
The Law of Demand:	**The Law of Supply:**
Why is demand downward sloping?	**Why is supply upward sloping?**
Demand Curve	**Supply Curve**

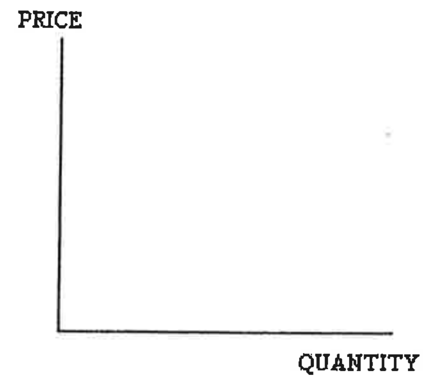
Demand Curve

Price	Quanity



Supply Curve

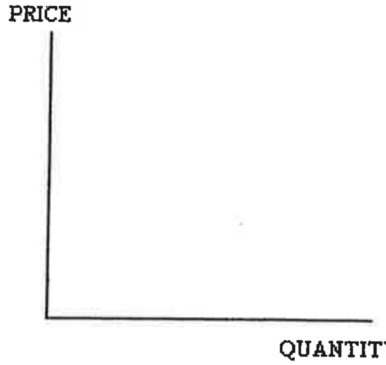
Price	Quanity

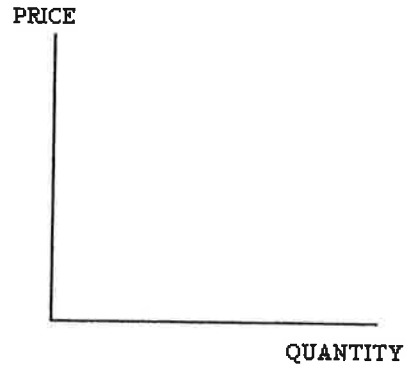


Demand	Supply
What changes quantity demanded?	**What changes quantity supplied?**
What changes demand? (5 Shifters of Demand)	**What changes supply? (6 Shifters of Supply)**

Explain the difference between a "change in demand" and change in "quantity demand"

Supply and Demand Together





Equilibrium- Qd____Qs

Shortage- Qd____Qs

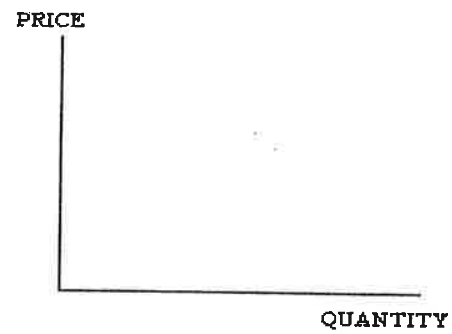
Surplus- Qd____Qs

Definition of Consumer Surplus (CS)

Definition of Producer Surplus (PS)

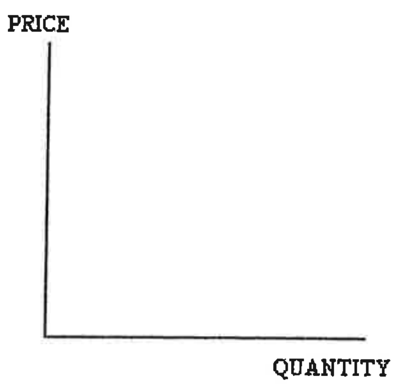
Definition of Dead Weight Loss (DWL)

CS and PS



Economic Analysis-What happens to P and Q?

Cereal Market

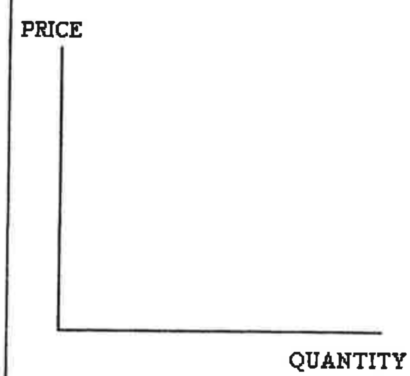


1. **Draw Equilibrium**
2. **Analyze Change**
   - Supply or Demand
   - Shifter-
   - Increase or Decrease
3. **New Equilibrium**
   - What Happens to:
     Price_____
     Quantity______

Change: Price of milk increases significantly

Double Shifts in Demand and Supply

Rule:



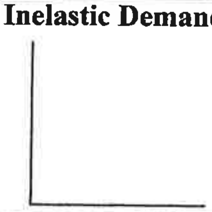
If demand decreases AND supply increases, what happens to

P _____ Q_____

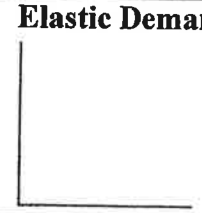
Elasticity of Demand

Elasticity of Supply

Inelastic Demand



Elastic Demand



Elasticity of Demand Coefficients

- Perfectly Inelastic
- Relatively Inelastic
- Unit Elastic
- Relatively Elastic
- Perfectly Elastic

Total Revenue Test

Inelastic Demand

When price increases, TR ____

When price decreases, TR ____

Elastic Demand

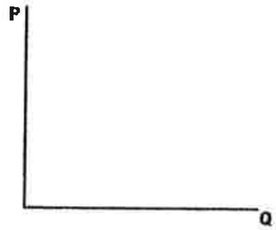
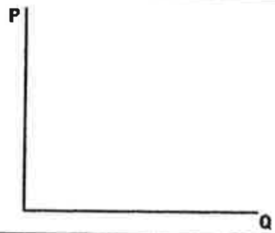
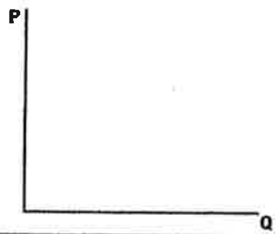
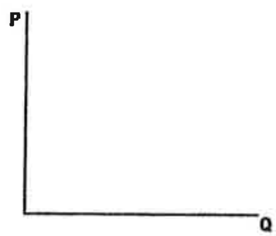
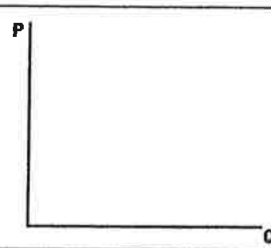
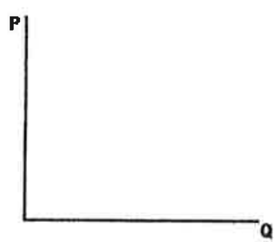
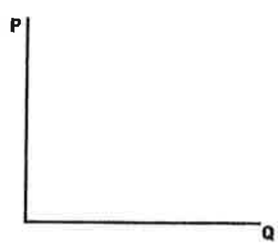
When price increases, TR ____

When price decreases, TR ____

Demand and Supply Practice

Use Economic Analysis to determine what happens to the price and quantity of computer games in each scenario.

#	Change	Graph	Economic Analysis
1	It becomes known that an electronics store is going to have a sale on their computer games 3 months from now.	P Q	1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
2	The workers who produce the computer games go on strike for over two months	P Q	1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
3	When the average price of movie tickets rises, it has an effect on the purchase of computer games. (Analyze computer games.)	P Q	1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
4.	The workers who produce the computer games negotiate a $20 per hour wage increase.	P Q	1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
5.	The price of business software, a product also supplied by computer game software producers, rises. (Analyze computer games.)	P Q	1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
6.	A reputable private research institute announces that children who play computer games also improve their grades in school.	P Q	1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
7.	Because of the use of mass production techniques, workers in the computer game industry become more productive	P Q	1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____

8.	The price of home computers decreases significantly. (Analyze computer games.)		1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
9.	The Federal government imposes a $5 per game tax on the manufacturers of the games.		1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
10	The manufacturer of the computer games raises the price on the games.		1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
11	In order to promote American production, Congress provides a subsidy to game producers. (Analyze only American firms)		1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
12	A large firm enters the game business with a new line of games. (Analyze the whole game industry)		1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
13	In order make computer games available to low-income families, Congress sets a price ceiling for the games.		1. Draw and Label Equilibrium: 2. The Change: Supply or Demand Increase or Decrease Shifter 3. After: Price _____ Quantity_____
14	The popularity of the computer games increases in the world markets. At the same time new technology lower production costs. **(Double Shift)**		1. Draw and Label Equilibrium: 2. The Change: Demand- Up or Down Shifter- Supply- Up or Down Shifter- 3. After: Price _____ Quantity_____

Adapted from The Study Guide by Walstad and Bingham p. 35, exercise 7 and Sally Dickson.