

Name: _____

Date: _____

Period: _____

Supply and Demand ~ The Pearl Exchange

Pearls from the island of Bali are valued all over the world. Buyers and sellers meet weekly at the pearl exchange market here in room P-101. During the 5 minute long trading sessions, half the class will be buyers the other half will be sellers. Your goal is to make as much surplus (profit) by negotiating a favorable price.

- The buyer must try to buy pearls as cheaply as they can; if they pay less than their maximum price then they get a consumer surplus.
- Sellers must try to sell their product for as much as they can, if they sell above the minimum price they get a seller's surplus.

There will be four trading sessions and you can only sell/buy once per session. When you make a deal shake hands and go tell Mr. Cooper your selling price to record on the front board. Then record the information for selling/ buying on your worksheet at your desk. **Don't tell people what your max or minimum price was until after we talk about the round.** The goal is to make a transaction each and every round you are participating. If you do not buy a product that round, your maximum or minimum price becomes a negative amount!

How to calculate a buyer's surplus:

buyer surplus (profit) = buyer's max price – sold price

How to calculate a seller's surplus:

seller's surplus (profit) = sold price – seller's minimum price

TRADING RECORD

Round 1

Note: For round 1, the surplus will be equal to total because we just started!

Max/min price	Price you paid/bought for	Surplus	Total

Equilibrium price = _____ (average price for sold pearls)

Round 2

Max/min price	Price you paid/bought for	Surplus	Total

Equilibrium price = _____ (average price for sold pearls)

Round 3

~~Note: Remember, the surplus can be negative if you don't make a trade.~~

Max/min price	Price you paid/bought for	Surplus	Total

Equilibrium price = _____ (average price for sold pearls)

Round 4

Max/min price	Price you paid/bought for	Surplus	Grand Total

Equilibrium price = _____ (average price for sold pearls)

REVIEW QUESTIONS

1. What was your grand total surplus? _____
2. Was it positive or negative? _____
3. What occurred to the equilibrium price? Did it increase, decrease, or fluctuate over time?

4. Did you sell or buy every single trading session? If you didn't explain why you couldn't do so.

5. What sorts of strategies worked when trying to sell for a higher price?

6. What strategies worked when trying to buy at a lower price?

7. If supply is low (more buyers than sellers) what happens to the price of the pearls? Did they increase or decrease? _____
8. If demand is low (more sellers than buyers) what happens to the price of the pearls? Did they increase or decrease? _____

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PRICE ELASTICITY OF SUPPLY WORKSHEET

Elasticity of Supply: Measure of how responsive quantity supply is to a price change. The **higher** the measure then the **more responsive** producer will be to a change in price according to the Law of Supply. The **lower** the measure then the **less responsive** the producer will be to a change in price according to the Law of Supply

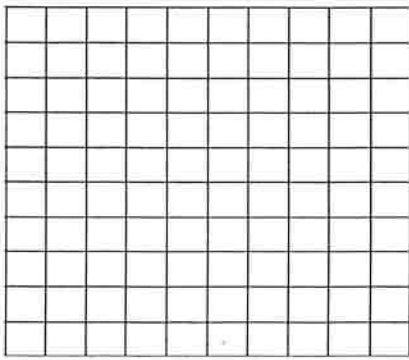
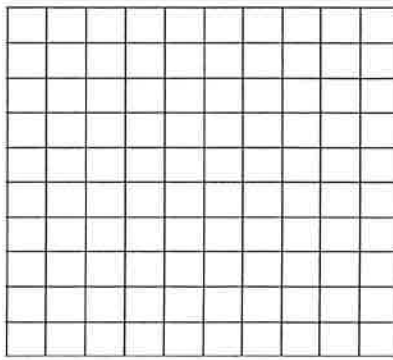
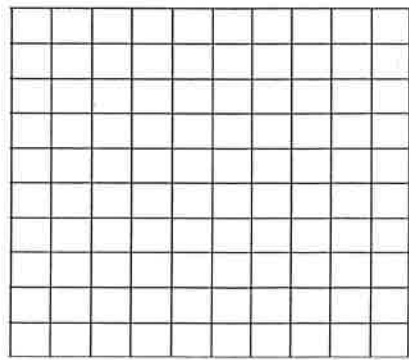
Part I: Elastic or Inelastic

Directions: For the following goods below identify if the good is likely to be price elastic or inelastic, then provide an explanation why.

Good/Service	Elastic/Inelastic	Explanation
Strawberries		
Hamburgers		
Oil Changes		
Aircraft Carriers		
Toothpicks		

Part II: Elasticity Graphs

Directions: Below create a graph for each of the Supply Schedules then label the graphs as **Elastic, Inelastic, or Unitary Elastic**

ORANGES		ICE CREAM SCOOPS		TOY CARS	
Price (\$ per lb)	Quantity (thousands of lbs)	Price of Ice Cream (\$)	Quantity Supplied (millions)	Price	Quantity Supplied (millions)
50	28	1.75	55	2.50	50
40	26	1.50	45	2.00	40
30	24	1.25	35	1.50	30
20	22	1.00	25	1.00	20
10	20	.75	15	.5	10
.50		.50	5		
GRAPH		GRAPH		GRAPH	
					
Elastic, Inelastic or Unitary Elastic		Elastic, Inelastic or Unitary Elastic		Elastic, Inelastic, or Unitary Elastic	

Part II: Calculating Elasticity

1. An Elasticity of 1.0 of greater = _____ supply
2. An Elasticity of exactly 1.0 = _____ supply
3. An Elasticity of between 0 and 1.0 = _____ supply

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

STEP 1: Calculate the % change in quantity supplied - % Δ S

$$[\text{QDSupplied1 (New)} - \text{QSupplied2(Original)}] / \text{QSupplied1(Original)}$$

STEP 2: Calculate the % change in price - % Δ P

$$[\text{Price1(New)} - \text{Price2(Original)}] / \text{Price1(Original)}$$

STEP 3: Calculate the price elasticity of Supply - % Δ Q / % Δ P

$$\% \text{ Change in Quantity Supplied(STEP 1)} / \% \text{ Change in Price (STEP 2)}$$

Quantity		Price		STEP 1	STEP 2	STEP 3
Original Q (S1)	New Q (S2)	Original Price (P1)	New Price (P2)	% Change in S	% Change in Price	Elasticity Calculation
15	20	40	80			
40	70	35	40			

IV. Calculating Elasticity from Supply Schedules

As seen above, in order to calculate elasticity all you need is price points and quantity supplied. This information is listed in any supply schedule. Choose any two price points and quantities in order to calculate elasticity for that price change. However, remember that elasticity changes throughout the supply curve, so you are only calculating for that specific price change.

Directions: Use the information from the Supply Schedules below to calculate elasticity for each product. Use the highlighted prices and quantities for your calculation. **SHOW YOUR WORK!**

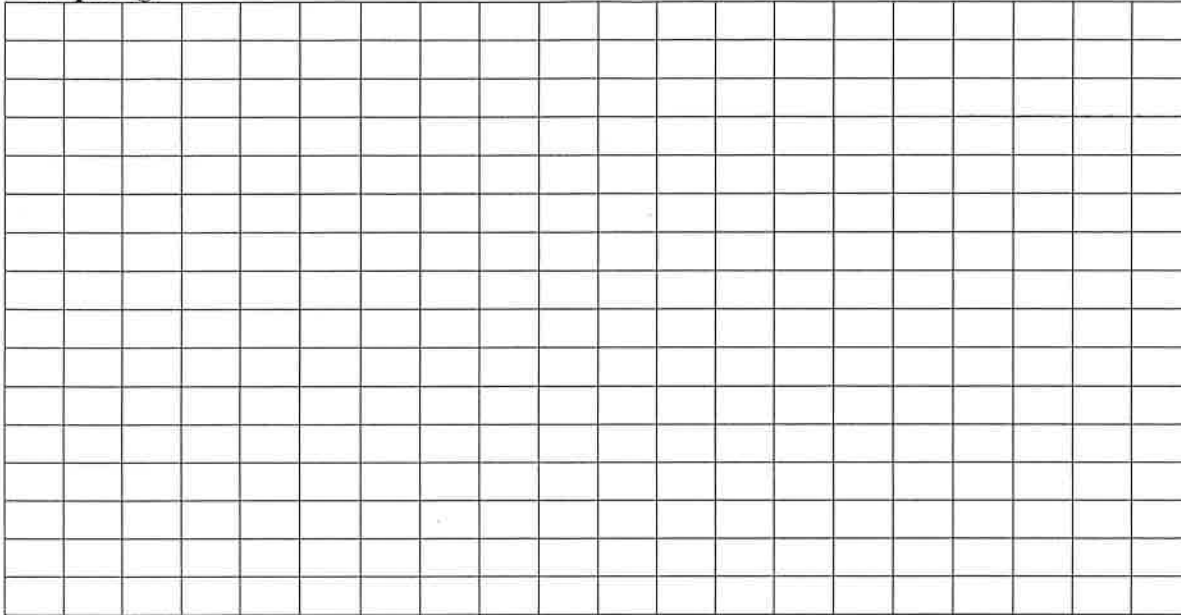
ORANGES		ICE CREAM SCOOPS		TOY CARS	
Price (\$ per ton)	Quantity (thousands of tons)	Price of Ice Cream (\$)	Quantity Supplied (millions)	Price	Quantity Supplied (millions)
50	28	P2 - 1.75	85	2.50	50
40	26	P1 - 1.50	55	2.00	40
30	24	1.25	35	1.50	30
P2 - 20	S2 - 22	1.00	20	P2 - 1.00	S2 - 20
P1 - 10	S1 - 20	.75	10	P1 - .50	S1 - 10
		.25	5		

1. Oranges Price Elasticity of Supply: _____ (Calculation) + _____ (Elastic, Inelastic, Unitary)
2. Ice Cream Price Elasticity of Supply: _____ (Calculation) + _____ (Elastic, Inelastic, Unitary)
3. Toy Cars Prices Elasticity of Supply: _____ (Calculation) + _____ (Elastic, Inelastic, Unitary)

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Interfering with Equilibrium: Price Ceilings and Price Floors

Graphing Rent Control



Directions: Graph the following supply and demand curves for apartments in NYC, then add in the rent control line and answer the questions below. Make sure to label all parts!

Demand

Price:	Quantity:
\$750	40,000
\$1,000	34,000
\$1,250	28,000
\$1,500	22,000
\$1,750	16,000
\$2,000	10,000
\$2,250	4,000

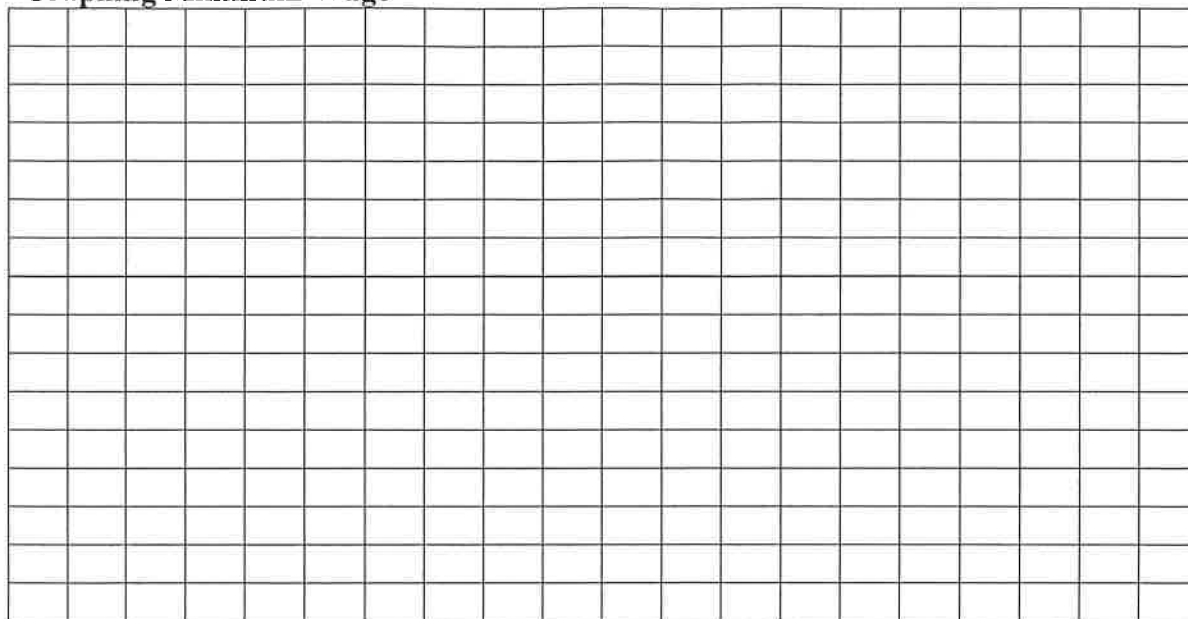
Supply

Price:	Quantity:
\$750	4,000
\$1,000	10,000
\$1,250	16,000
\$1,500	22,000
\$1,750	28,000
\$2,000	34,000
\$2,250	40,000

Rent Control = \$1,250

1. What is the equilibrium price _____ and quantity? _____
2. With the rent control set at \$1,250, what is the shortage (quantity) of apartments in NYC? _____ Is this a price ceiling or a price floor? _____
3. What are some realistic options that could be explored to address the shortage of apartments by NYC government officials?

Graphing Minimum Wage



Directions: Graph the following supply and demand curves for labor in the US, then add in the minimum wage line and answer the questions below. Make sure to label all parts!

Demand

Price:	Quantity:
\$1	30 million
\$3	25 million
\$5	20 million
\$7	15 million
\$9	10 million
\$11	5 million

Supply

Price:	Quantity:
\$1	5 million
\$3	10 million
\$5	15 million
\$7	20 million
\$9	25 million
\$11	30 million

Minimum Wage = \$7.25

1. What is the equilibrium price? _____ and quantity? _____
2. With the minimum wage set at \$7.25, what is the surplus (quantity) of labor in the US?

3. Is this a price ceiling or a price floor? _____
4. What are some realistic options that the Federal Government could explore to deal with the surplus of labor?