

# EFFICIENCY AND DEADWEIGHT

## LOSS PT. 1

**9.50- Explain how taxes affect total surplus and can create deadweight loss.**

# KICKOFF:

- ❖ Grab a handout on the way in
- ❖ Complete the handout for your kickoff
- ❖ **Roll Call:** Best Halloween costume?



# ANNOUNCEMENTS

- ❖ Homeroom this week
  - Knight Time next week
- ❖ Quiz next week, testing the week after

# EFFICIENCY AND DEADWEIGHT

## LOSS PT. 1

**9.50- Explain how taxes affect total surplus and can create deadweight loss.**

# EQUITY V. EFFICIENCY

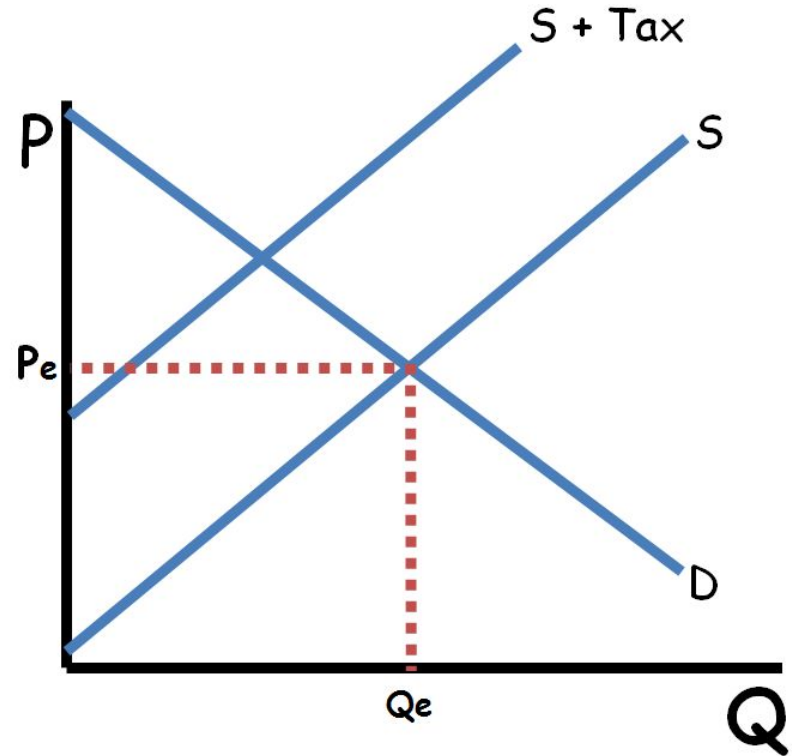
- ❖ We operate under the assumption that markets operate efficiently
- ❖ Are efficiency and equity the same thing?
  - No
- ❖ What is more important?
  - That's up to you
- ❖ Taxes tend to increase equity but decrease efficiency

# TYPES OF TAXES

- ❖ Progressive- more you make, the higher a rate you pay
- ❖ Regressive- more you make, the less of a rate you pay
- ❖ Proportional- all taxpayers pay same proportion
- ❖ Excise tax- per unit tax on production or sale of a good

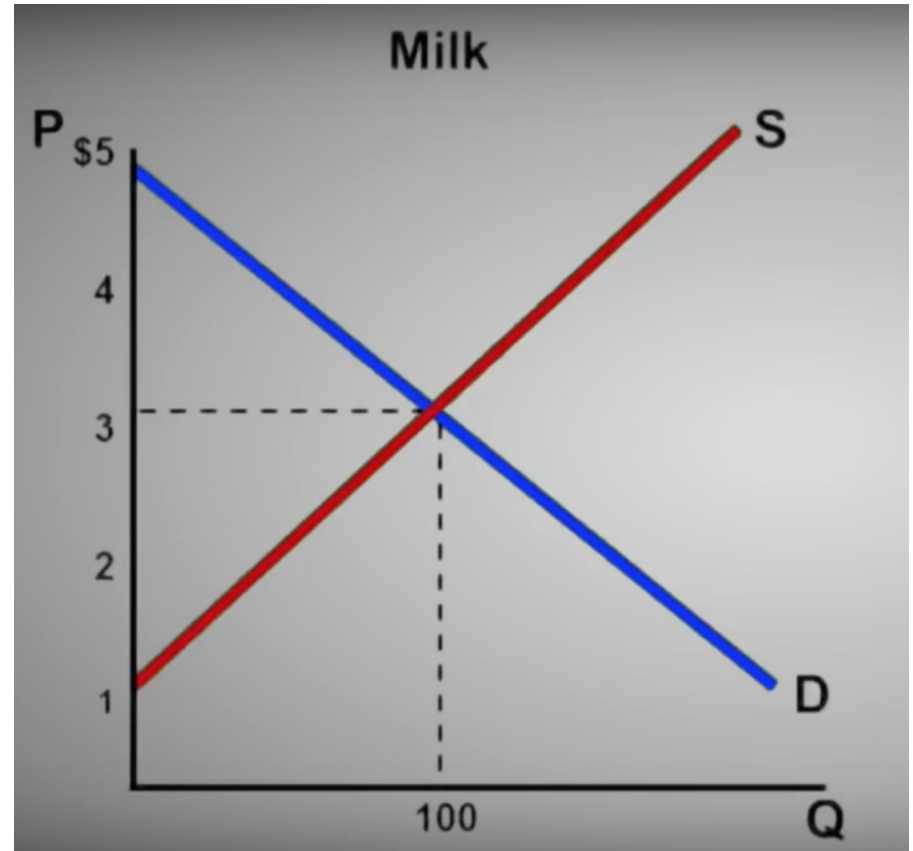
# EXCISE TAX- EFFECT ON SUPPLY AND DEMAND GRAPH

- ❖ Supply curve  
shifts up by the  
amount of the tax



# \$2 EXCISE ON MILK

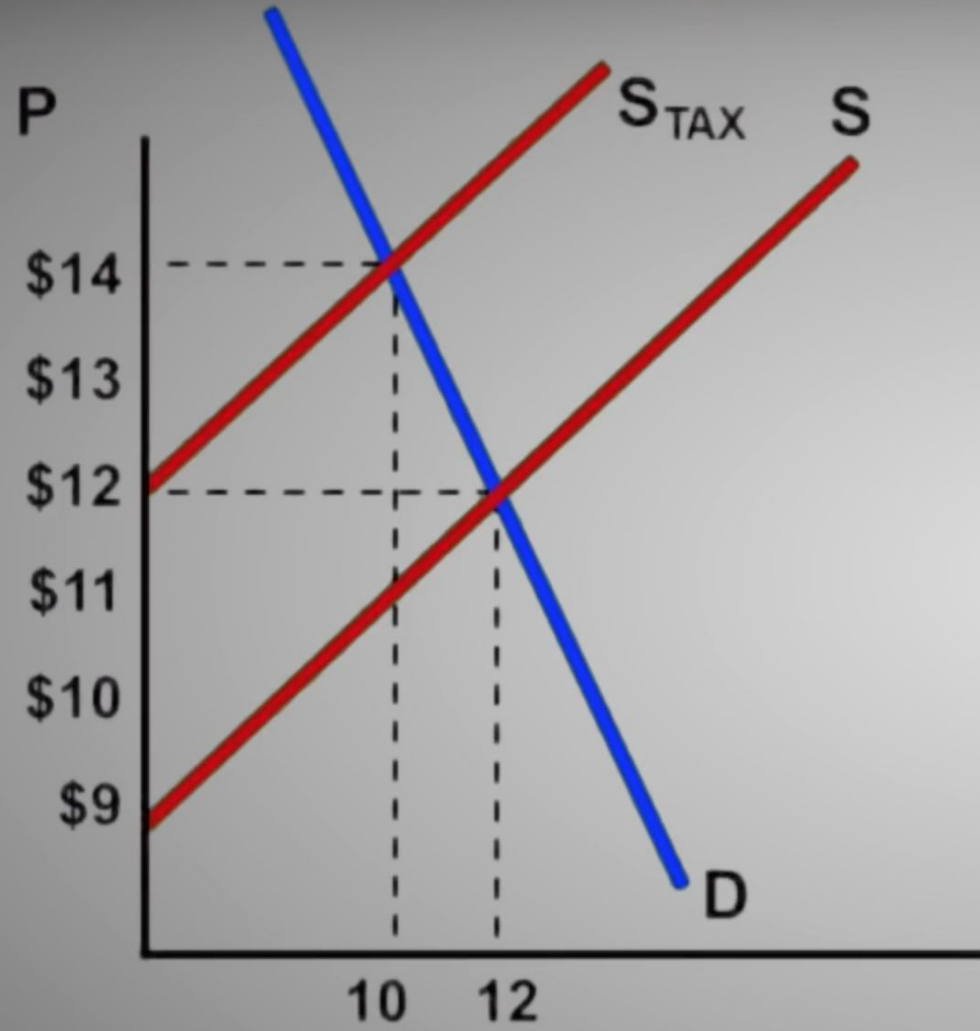
- ❖ Shift the supply curve left (up by the tax amount)
- ❖ New  $E_p$  and  $E_q$
- ❖ How much do buyers pay?
- ❖ Notice a wedge has been formed
- ❖ How much do sellers receive?
- ❖ How much is govt taking home in tax rev?



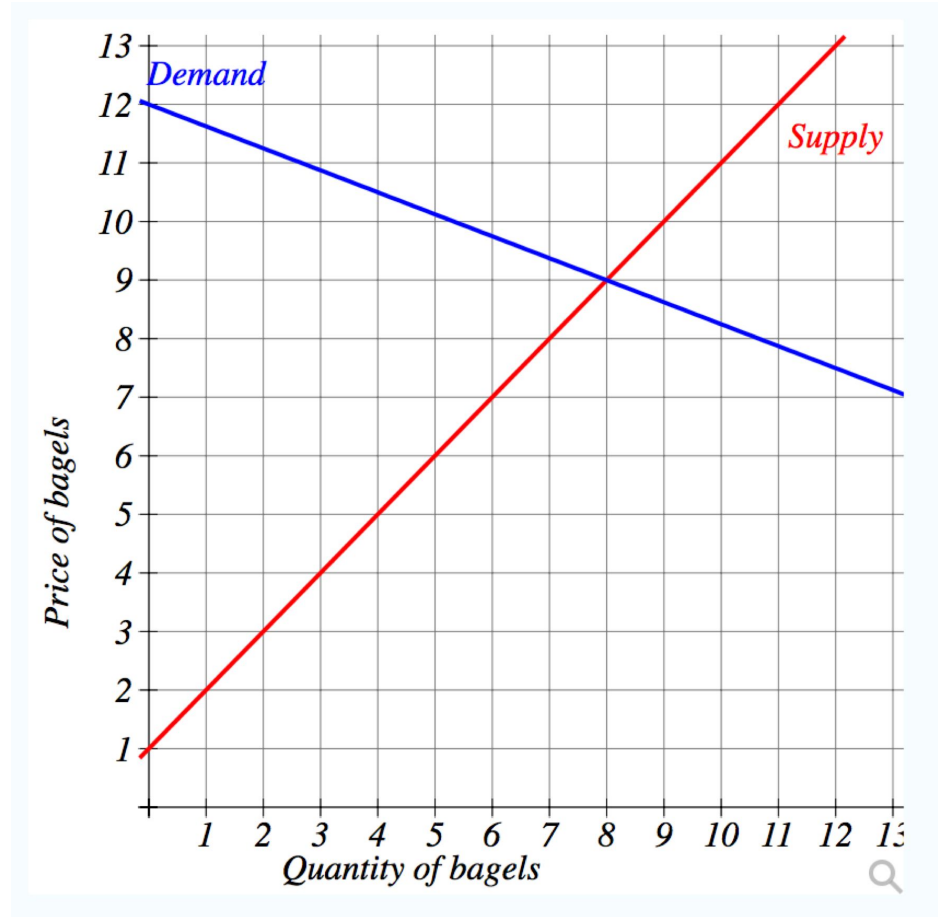


# LETS TRY IT

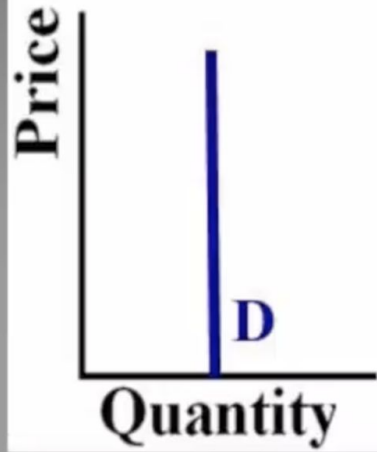
- ❖ Per unit tax?
- ❖ Govt tax revenue?
- ❖ Amount total paid by consumer?
- ❖ Amount total paid to producer?
- ❖ Total expenditure by consumers?
- ❖ Total firm revenue?
- ❖ DWL?
- ❖ Producer surplus?



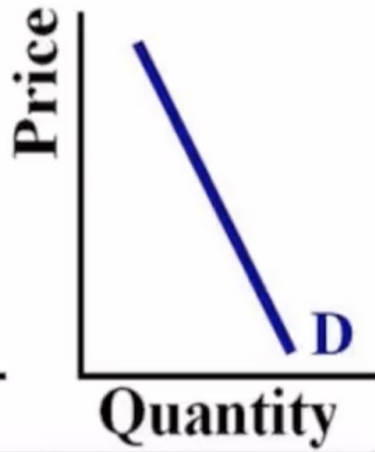
DRAW THE SHIFT IN THE GRAPH IF THERE WERE A \$4 PER UNIT TAX PUT ON BAGELS AND ANSWER THE QUESTIONS



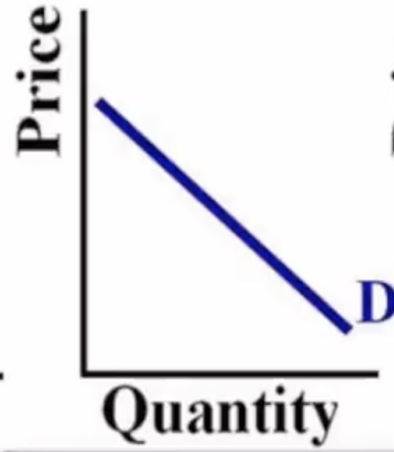
# WHO PAYS THE TAX?



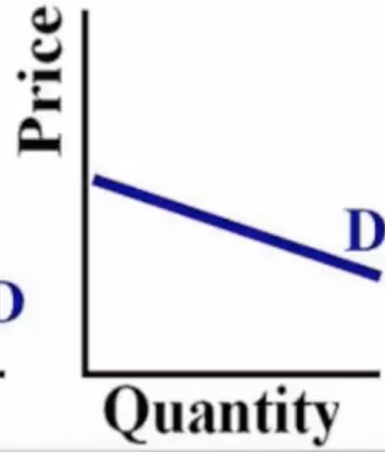
Perfectly Inelastic



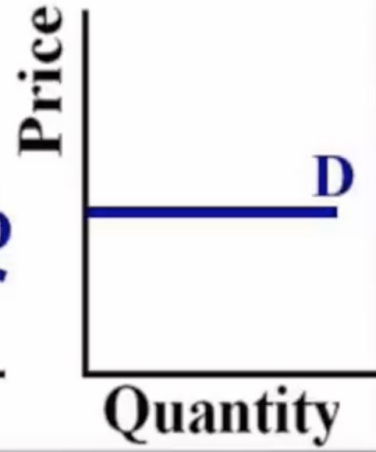
Relatively Inelastic



Unit Elastic



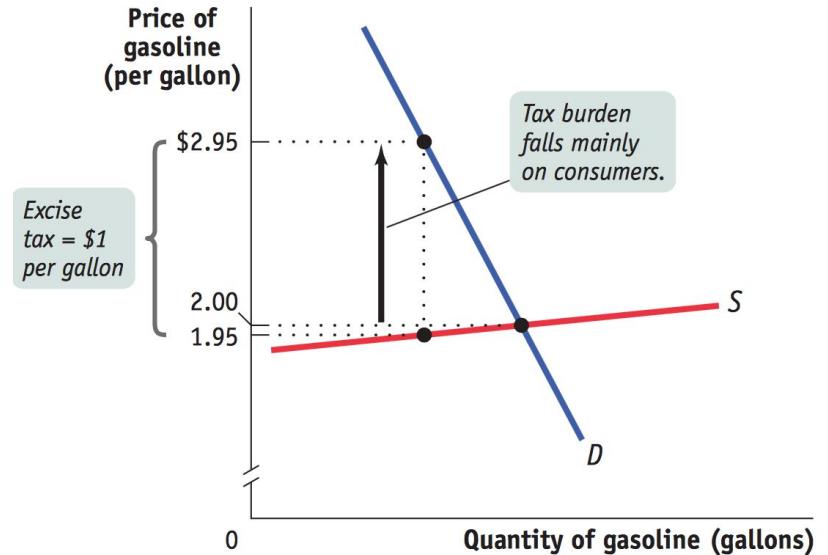
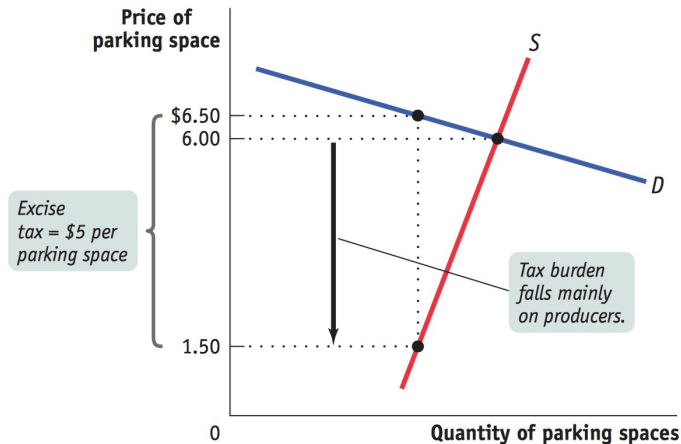
Relatively Elastic



Perfectly Elastic

# WHO PAYS THE TAX?

- ❖ Whoever has a more inelastic curve, carries a heavier burden of the tax
- ❖ Demand = Consumer
- ❖ Supply = Producer



# CREATE YOUR OWN - CS, PS, AND DWL W/ PRICE CONTROLS

- ❖ On the top half of your graph paper, draw the market for a product when the market is operating efficiently
  - Correctly label all parts of the graph, shade in both the CS & PS in different colors
  - On the back in pencil: calculate the CS, PS, TS and DWL
- ❖ On the bottom half of your graph paper, create a scenario in which the government implements a price control on your product → Write the scenario
  - Correctly label all parts of the graph, shade in the new CS, PS, and DWL in different color
  - On the back in pencil calculate CS, PS, TS, and DWL.

# GROUPS FROM FRIDAY

❖ Using the original graph in equilibrium your group created on Friday, draw and correctly label a graph with an excise tax of:

- T-shirts: \$15
- Oreos: \$2
- Scrunchies: \$5
- Peanuts: \$2
- Headphone: \$15
- Grapefruit: \$1.50

Identify and staple on a separate sheet of paper:

- ❖ Price paid by consumer
- ❖ Price kept by producer
- ❖ PS, CS, TS
- ❖ DWL
- ❖ Total govt tax rev
- ❖ Amount of tax paid by consumer and producer
- ❖ Total expenditures
- ❖ Total producer revenue

# OIL TAX AND TYPES OF TAXES

- ❖ Complete the oil tax and types of taxes worksheet

# CLOSURE

- ❖ Describe the effect an excise tax on iphones would have on the market for iphones. Be sure to mention the effect on surplus, DWL, and government revenues. How would it be determined who would pay more of this tax?
- ❖ How could one argue that the federal income tax is both progressive and proportional?