

Government Policies That Alter the Private Market Outcome

- Price controls
 - Price ceiling: a legal maximum
 - Price floor: a legal minimum
- **Taxes**
 - The govt can make _____ pay a specific amount on _____ bought/sold.

1

1

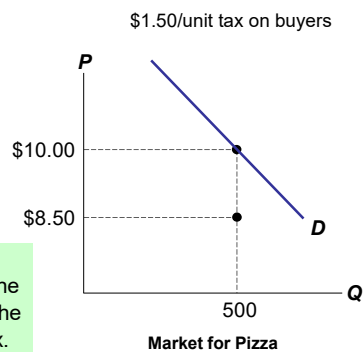
Taxes

- The govt levies taxes on many goods & services to _____ (national defense, public schools, etc.)
- The tax can be collected from _____.
- The tax can be a _____ of the good's price, or a _____ for each unit sold (*per-unit*).

2

2

A Tax on Buyers



3

3

A Tax on Buyers

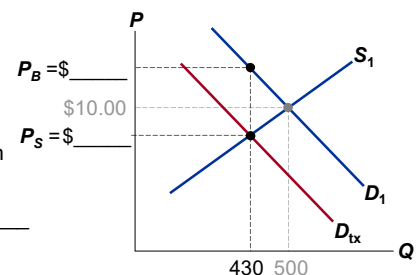
New eq'm:

$Q_e =$ _____

$P_B = \$$ _____

Difference between them
 $P_S = \$$ _____

The tax is a "_____."



4

4

Tax Incidence -- how the burden of a tax is shared

Initially,

$P_e = \$10.00$

$Q_e = 500$

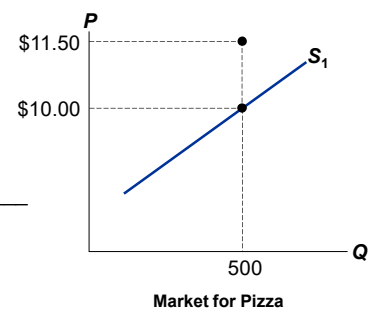
Now, with the tax, buyers pay \$1.00 more, sellers get \$0.50 less.

5

5

A Tax on Sellers

\$1.50/unit tax on sellers



6

6

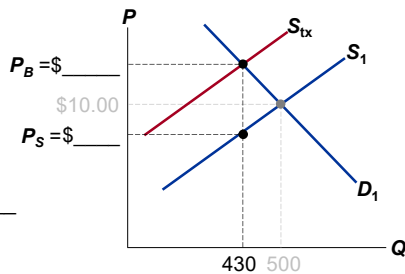
A Tax on Sellers

New eq'm:

$Q =$ _____

$P_B = \$$ _____
 Difference between them $P_S = \$$ _____

Effects of a \$1.50 per unit tax on sellers

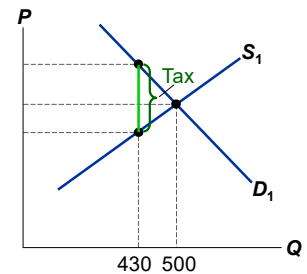


Again, the tax is a "wedge."

7

The Outcome Is the Same in Both Cases!

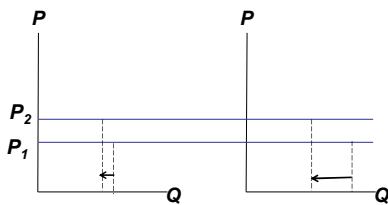
A tax drives a _____ between the price buyers pay and the price sellers receive.

clq
8

Who Will Bear the Burden of a Tax?

Well, _____ ...

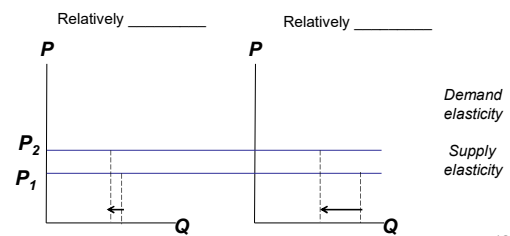
How "_____ " are buyers and sellers to a price change?



9

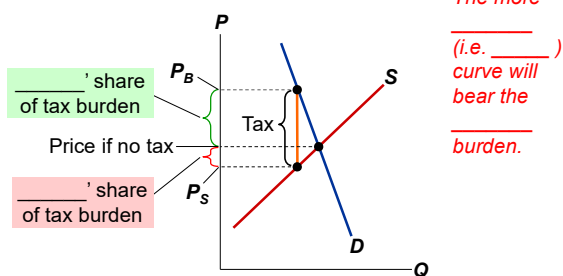
Who Will Bear the Burden of a Tax?

This "responsiveness" = "elasticity" for economists



10

Who Will Bear the _____ of a Tax?



Supply is "_____ " than demand (more "elastic")

11

Government Policies ... and the Allocation of Resources

- Policies affect the allocation of society's resources.
- Implications...

Future policymakers: please apply these policies very _____!

12

Welfare Economics

Welfare economics:

the study of how the allocation of resources affects _____.

Consumer Surplus

Producer Surplus

Total Surplus

Market efficiency....

13

13

Demand...WTP

Willingness to pay - maximum amount the buyer _____ for a given Q

Thus, WTP measures buyer's "_____."
(satisfaction, utility)

How does that compare with what the buyer must _____?

14

14

Consumer Surplus (CS)

Consumer surplus: amount a buyer is willing to pay _____ what the buyer _____, or

CS =

Suppose **WTP** = \$90

Suppose **P** = \$80

CS = \$

15

15

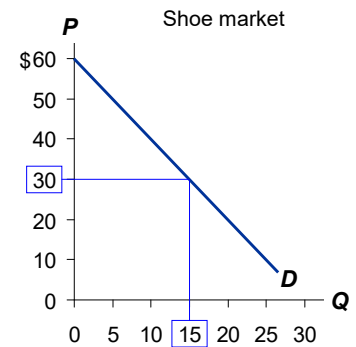
Consumer Surplus

CS: Area _____ the demand curve and _____ the price

($A = \frac{1}{2} \times \text{base} \times \text{height}$)

Height:

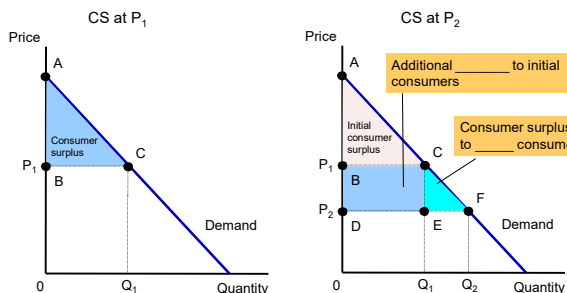
So,
CS =



16

16

Price Changes Affect CS:

clq
17

17

Supply...WTS

■ **Cost:** value of everything a seller _____ to produce a good (i.e., _____ cost)

- A seller will only produce and sell the good if the _____.
- Thus, *cost is a measure of willingness to sell (WTS)*.
- What about WTS and P ?

18

18

Producer Surplus (PS)

Producer surplus: amount a seller is paid for a good minus the seller's cost, or

$$PS =$$

19

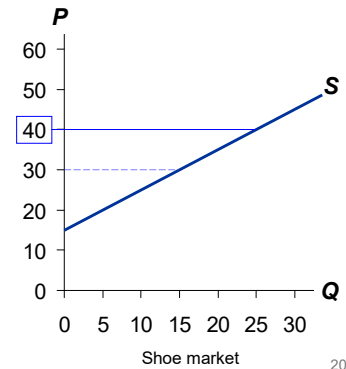
Producer Surplus

Suppose $P = \$40$.

At $Q = 15$, the seller's cost is

\$ _____,

$PS = \$$ _____



20

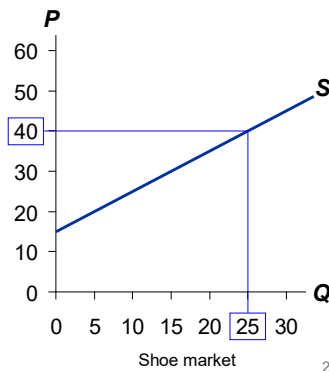
Producer Surplus

PS is the area b/w P and S .

$$PS = \frac{1}{2} \times b \times h$$

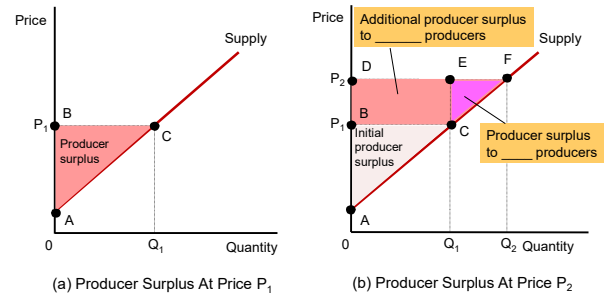
$$=$$

$$=$$



21

Price Changes Affect PS:

clq
22

What Do CS, PS, and Total Surplus Measure?

CS = (value to _____) – (amount paid by _____)
i.e. benefit to _____

PS = (amount received by _____) – (cost to _____)
i.e. benefit to _____

Total surplus = _____
= the total gains from trade in a market.
= (value to buyers) – (cost to sellers)

Is the market outcome efficient?

23

Evaluating the Market Equilibrium

Market eq'm:

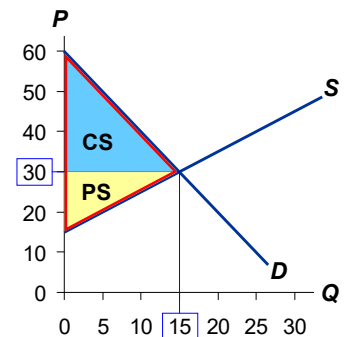
$P =$ _____

$Q =$ _____

Total surplus
=

1) Is the market eq'm efficient?

2) Is total surplus maximized?



24

The Free Market vs. Govt Intervention

- Can the govt raise total surplus in a competitive market?
- _____ (fr "allow them to do"):
the notion that govt should not interfere with the market

25

25

Welfare "Tools" Applied...

- What happens to efficiency when taxes are introduced in a market?
- What about CS and PS with price controls?

26

26

The Effects of a Tax

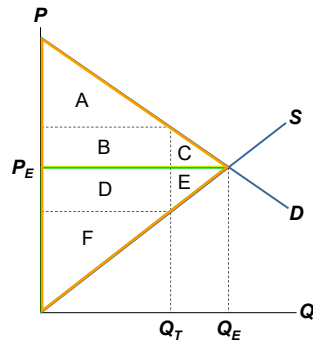
No tax:

CS =

PS =

Tax revenue =

Total surplus =



27

27

The Effects of a Tax

With the tax,

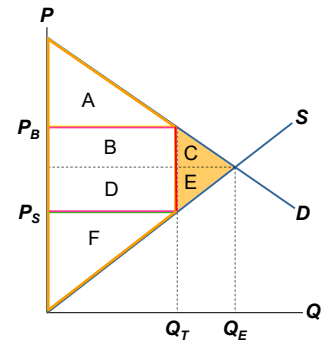
CS =

PS =

Tax revenue =

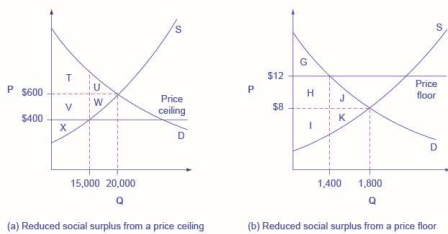
Total surplus =

Total surplus ↓ by

clq
28

28

DWL & Price Controls



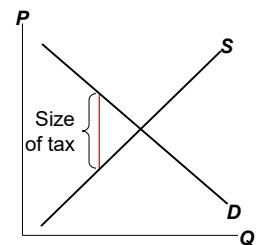
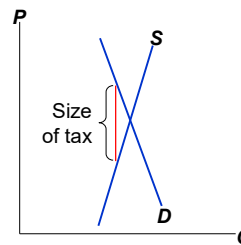
29

29

DWL & Elasticity

Relatively _____

Relatively _____



30

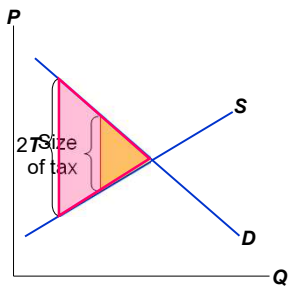
30

DWL & Elasticity

What about tax increases?

Double the tax, the DWL increases by

And revenue begins to _____!



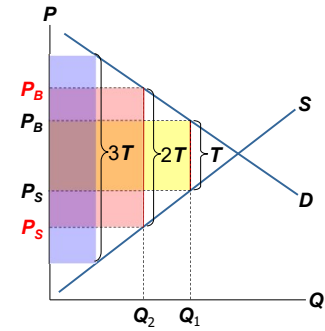
31

31

Revenue & Size of the Tax

Implications?

Layered taxes?

clq
32

32