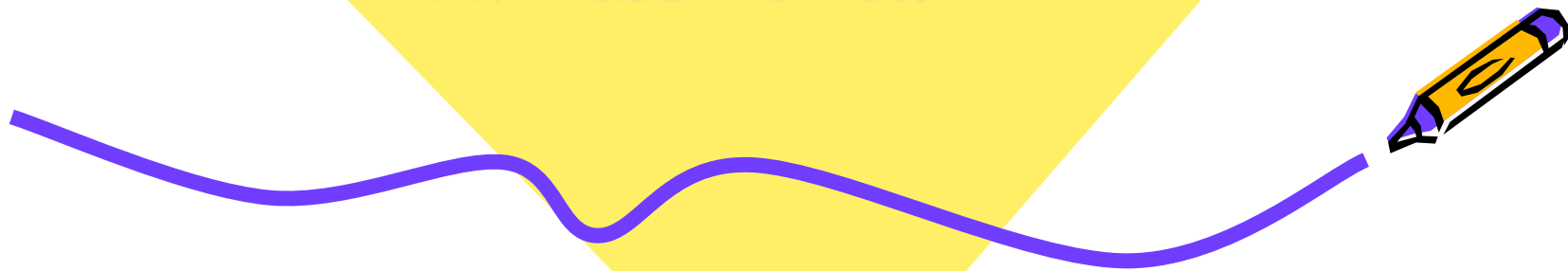


A.P. Microeconomics

In Class Review #2



Pricing

1. Pricing system serves as a rationing device
 - The market decides who gets g&s by which households are willing to pay the price for it!!



Pricing

- a. Even when price ceilings are implemented to keep prices at a "fair" level, the rationing system will usually win out.
 - The Market will find a way to get to its happy place, even if it's illegal!!
 - Ex) black markets, scalping, eBay, etc.



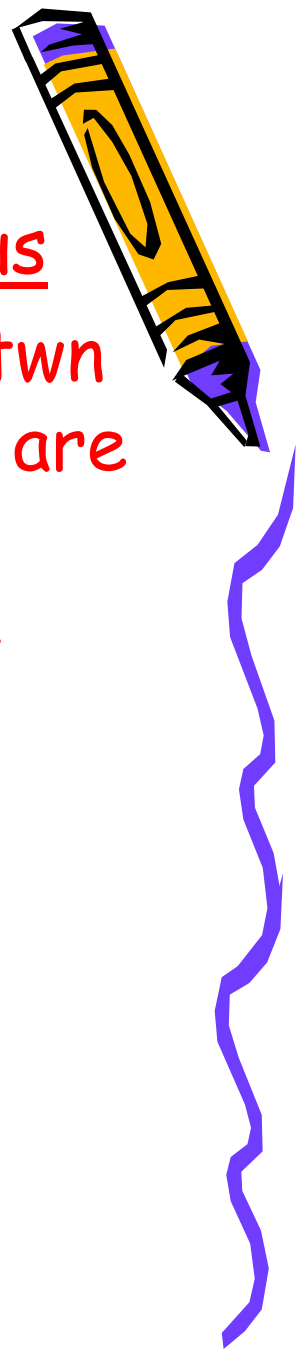
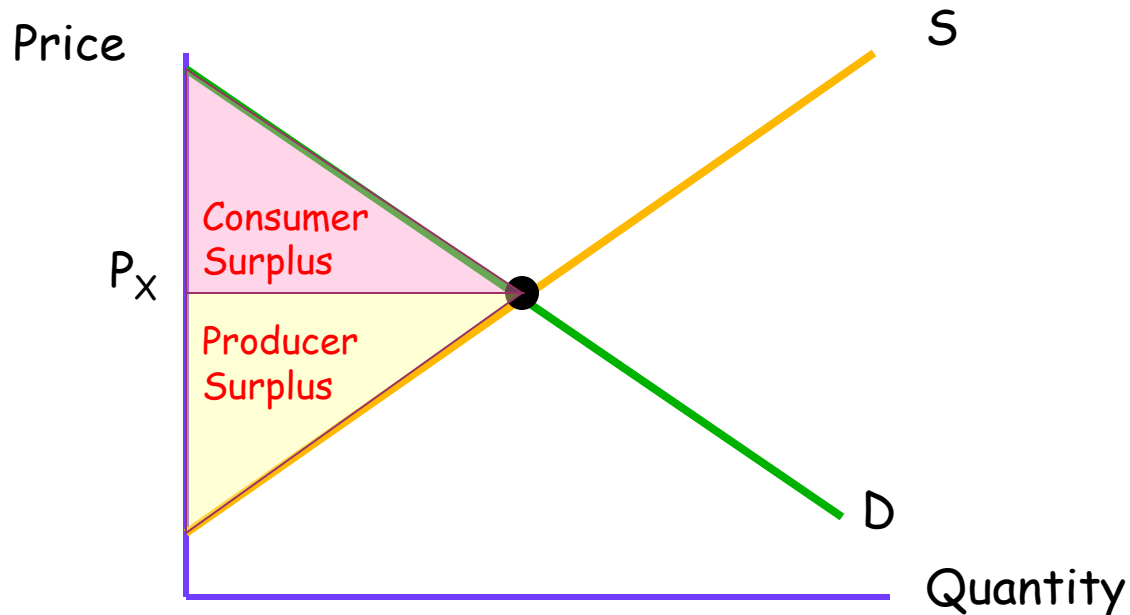
Pricing

- Consumer Surplus

The difference btwn utility gained and price paid (what we are willing to pay over actual price)

- Producer Surplus

The difference btwn what producers are willing to sell at and actual price



Elasticity

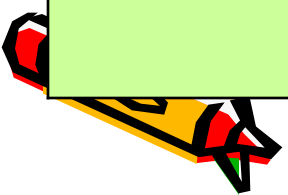
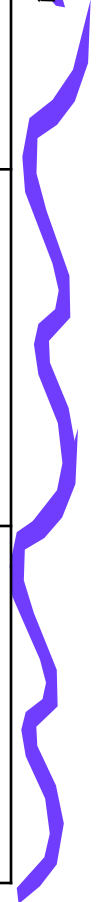


- How sensitive are firms and households to changes in price (Laws of Supply and Demand)
- To what degree will quantity change?
- **Formula**

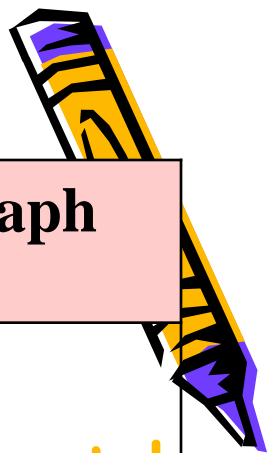
$$\frac{\% \Delta QD}{\% \Delta P}$$



Term	Def	Formula	Examples	Graph
Elastic	$\% \Delta QD > \% \Delta P$ Big change in quantity dem	$E_D > 1$	Not urgent, Large portion of budget, Lots of substitutes	Low slope, Higher priced parts of line
Inelastic	$\% \Delta QD < \% \Delta P$ Little change in quantity dem	$0 < E_D < 1$	Urgent, no substitutes, small portion of budget, medical needs	Steep slope, lower priced parts of line
Unit Elastic	$\% \Delta QD = \% \Delta P$ Same change in quantity dem	$E_D = 1$	Proportional change	45° angle



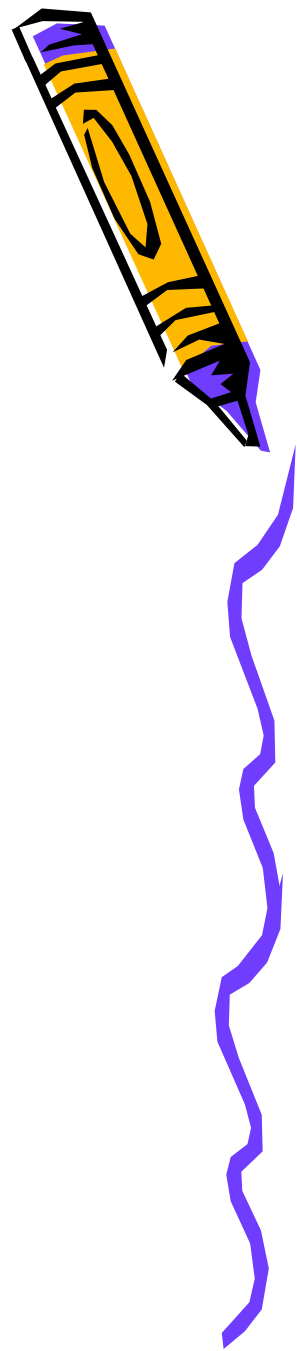
Term	Def	Formula	Examples	Graph
Perfectly Elastic	$\% \Delta P = 0$	$E_D = \infty$	Perfect Subs, fruits & veggies	Horizontal Line
Perfectly Inelastic	$\% \Delta QD = 0$	$E_D = 0$	No Subs, unique - limited product	Vertical Line



Factors Affecting Elasticity

1. Substitutability
2. Luxury vs. Necessity
3. Addictiveness
4. Time
5. Budget

P_x vs. portion of budget



Practice Problems:



1. Price of strawberries increase from \$3 to \$4 per pint and sales of strawberries decrease by 50%, how elastic are demand for strawberries?

$$\frac{\frac{Q_1 - Q_2}{Q_1}}{\frac{P_1 - P_2}{P_1}}$$

$$E_D = \frac{(3 - 4)/3}{.50} = \frac{(3 - 4)/3}{.50} = \frac{.33}{.50} = .66$$

$E_D = \text{Inelastic}$

OR - $\% \Delta QD$ is +33%, $\% \Delta P = 50\%$

Since quantity changed less than price it is inelastic



Practice Problem



1. Price of iPhones decrease by 25% and sales increase by 33%, how elastic is the demand for iPhones?
 - $.33/.25 = 1.32 = \text{Elastic}$
 - OR, $\% \Delta QD$ is +33%, $\% \Delta P = 25\%$
 - Since quantity changed greater than price it is elastic

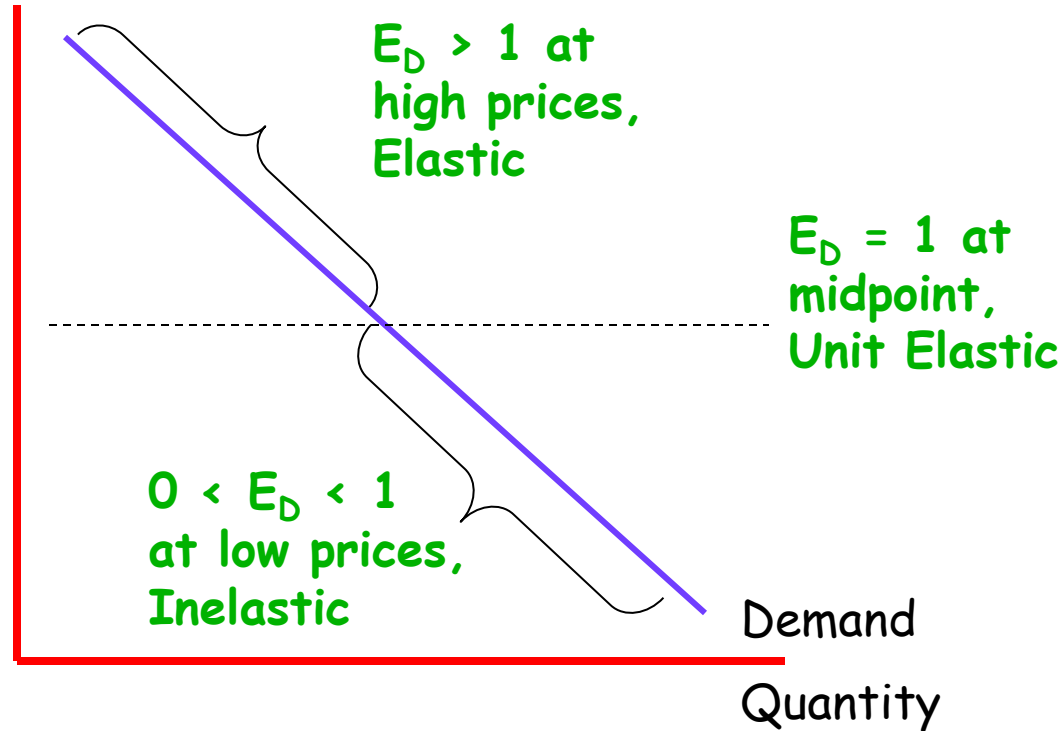


Demand Graph & Elasticity



Price

Find Midpoint
of the line!!!



Revenue Test



- Total Revenue = $p \times q$

Price	Quantity	Total Revenue
\$1	10	\$10
2	8	\$16
3	6	\$18
4	4	\$16
5	2	\$10
6	0	\$0



Revenue Test

- Price increase from \$1 to \$2, type of elasticity and what happens to TR?

E_D = Inelastic and TR Increased

- Price change from \$3 to \$4, type of elasticity and what happens to TR?

E_D = Unit Elastic and TR Decreased

- Price change from \$4 to \$5, type of elasticity and what happens to TR?

E_D = Elastic and TR Decreased

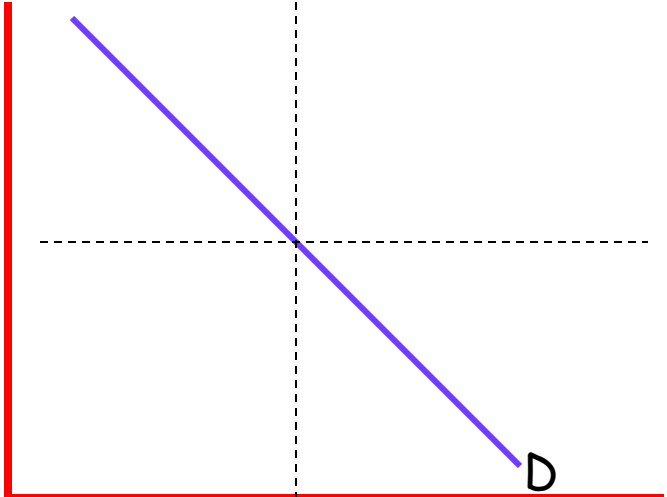
How can a firm increase Revenue?

If Elastic - Decrease Price

If Inelastic - Raise Price!!!



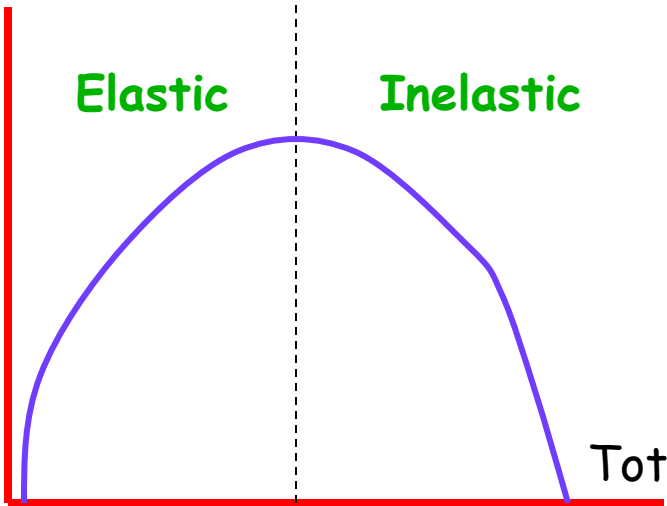
Price



Quantity



Revenue



Total Revenue

Output

Elastic

Inelastic

Unit
Elastic



Cross-Elasticity of Demand



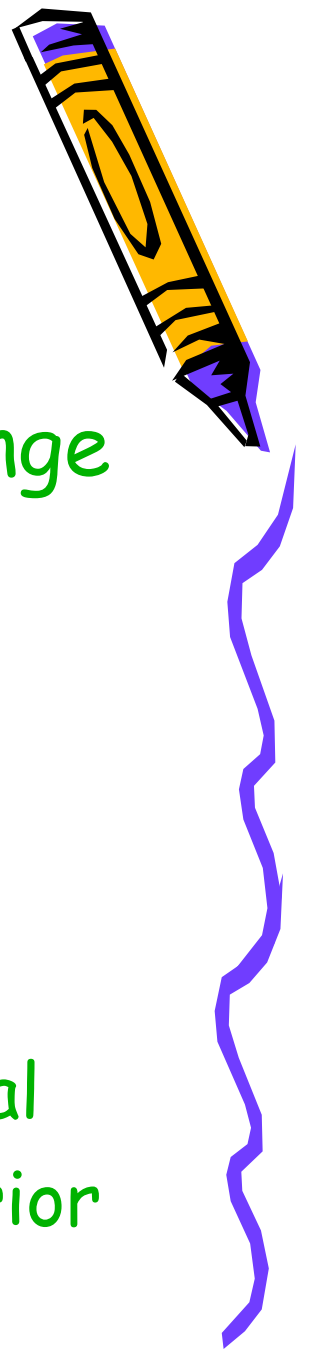
- Measuring the change in quantity of one good when the price of a related good is changed.

$$\frac{\% \Delta QD_y}{\% \Delta P_x}$$

RULES: positive sign goods are subs
negative sign goods are comps



Income Elasticity of Demand



- Compares change in income to change in quantity demanded
 - Normal good = buy more with more \$
 - Inferior good = buy more with less \$

$$\frac{\% \Delta QD}{\% \Delta I}$$

RULES: positive sign = goods are normal
negative sign = goods are inferior



Utility, etc.

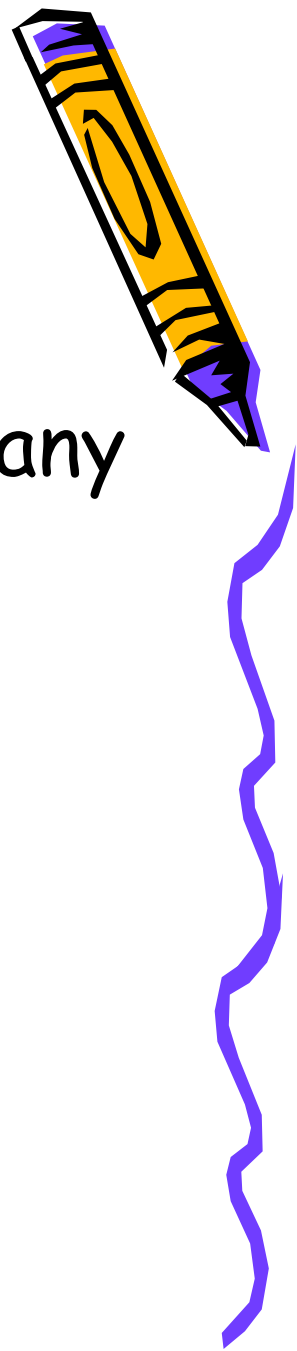
- Utility: satisfaction from consumption
- Marginal Utility: satisfaction from consumption of additional units
- Diminishing Marginal Utility: decreasing satisfaction from consumption of additional units



Utility-Maximizing Rule

- Ranking choices when consuming many goods; where will households get most utility per dollar:

$$\frac{MU_A}{P_A} = \frac{MU_B}{P_B} = \frac{MU_C}{P_C}$$



Answer:
4 cds and
5 candies

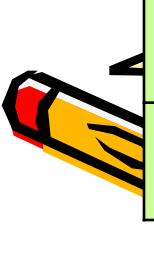
Budget Constraint: \$52

Price of CDs: \$8

Price of Candy: \$4

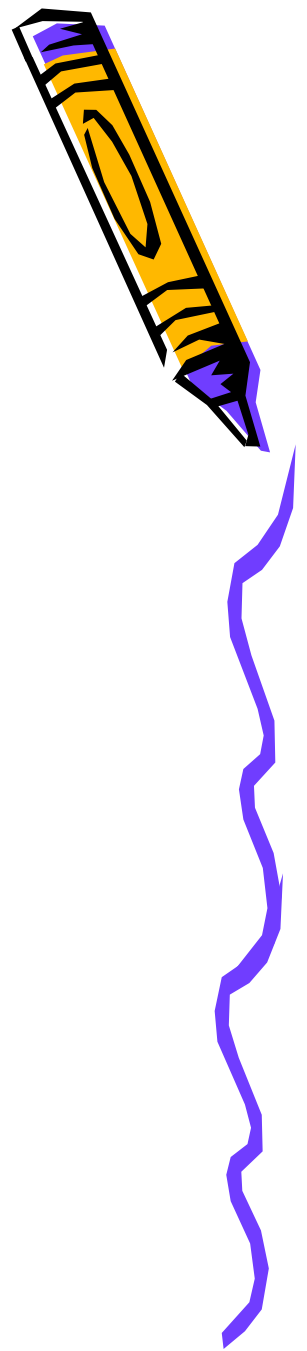


Units of CDs	Utility	Marginal Utility MU	MU/P	Units of Candy	Utility	Marginal Utility MU	MU/P
1	56	56	7	1	32	32	8
2	104	48	6	2	60	28	7
3	136	32	4	3	84	24	6
4	160	24	3	4	104	20	5
5	180	20	2.5	5	116	12	3
6	196	16	2	6	126	10	2.5
7	208	12	1.5	7	134	8	2



Income Effect

- As the price of a particular good decreases, a consumer can afford more of it and other goods
 - Ex) a usually expense (rent) gets cheaper so you have more money to spend!!



Substitution Effect

- As the price of a particular good decreases, a consumer may buy more of this good relative to the price of a substitute good
 - Ex) moving to a cheaper apartment

