Consumer Choice

Consumer Choice

- Consumers have unlimited wants.
- Consumers have limited income.
- Therefore, consumers must make choices in order to maximize satisfaction.

Consumer Choice

Consumers are rational.

- Able to establish preferences
- Consistency in choice
- Maximize satisfaction

Consumer Choice

Preferences

- There are only three types of choices:
- Also known as Completeness (as in completely describing choices available)

Tea Coffee

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Consumer Choice

Consistency (transitivity)

Coffee > Tea

Tea > Water, then

Coffee > Water

Consumer Choice

Two approaches to deriving demand curve

- Marginal Utility
- Indifference Curves

Consumer Choice

Concept of Utility

- People derive utility or satisfaction from consumption.
- As consumption increases, utility increases but at a decreasing rate.

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Concept of Marginal Utility

- Marginal utility is the utility gained from consuming one additional unit.
- Marginal utility decreases as consumption increases.
- People will stop consumption before MU = 0.

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Concept of the MU/P Ratio

- Consumers try to maximize the Benefit/Cost for all products.
- MU/P is that Benefit to Cost Ratio (Benefit/Cost).
- If one product offers a higher Benefit/Cost than other products, then more of it will be bought.

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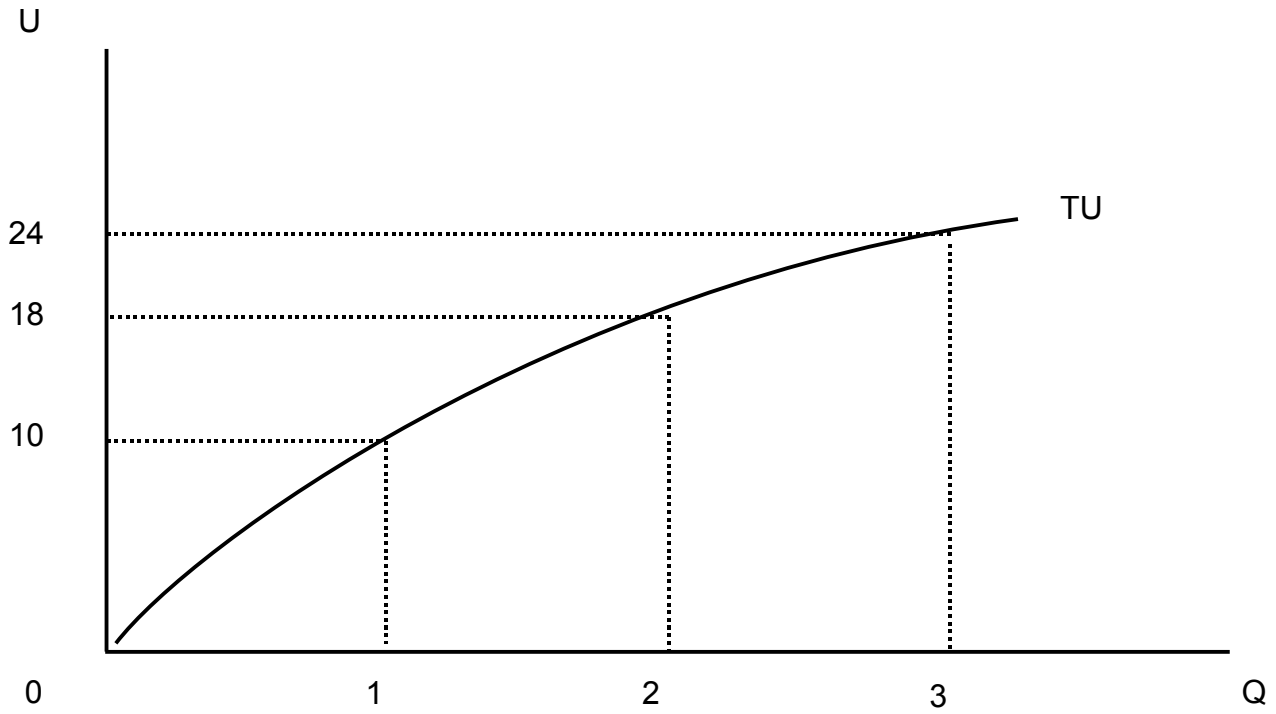
Sample Calculations

Q	U	MU	AU
1	10	10	10
2	18	8	9
3	24	6	8

Consumer Choice



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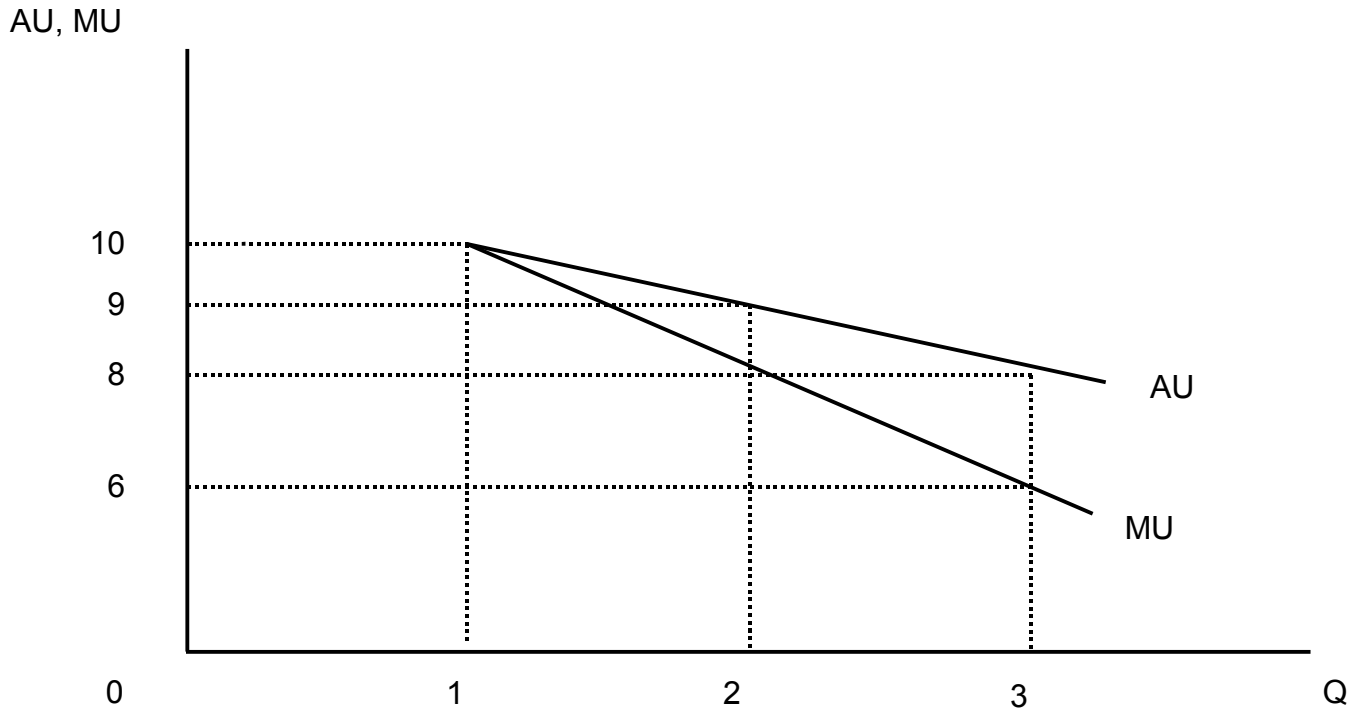

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- Consider that when consumers decrease their purchase of goods, that the MU and AU increase.
- Why is this important?
- It means that consumers can make adjustments to maximize their satisfaction for each dollar spent.

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Marginal Utility Approach

- People compare possible choices using a marginal utility to price ratio, MU/P.
- People rank choices.
- People buy goods until “value” of last unit consumed are equal.
- $MU_0/P_0 = MU_1/P_1 = ...=MU_n/P_n$

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Price

- Increasing price decreases the MU/P ratio thus making the good less valuable.
- Consumers will buy less of it which causes the MU to rise.
- Equilibrium will be reached when the MU/P ratio reaches the consumers average.

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Sample Problem

Q	MU Turkey	MU Pastrami
1	10	18
2	8	12
3	6	8
P	$3	$6

What are the MU/P ratios for Turkey and Pastrami?

Consumer Choice

- Let's say the currently three Turkey sandwiches are consumed: MU/P = 6/3 =2
- Now let the price increase to $4: 6/4 = 1.5
- Assuming the consumer's average MU/P is 2 then to increase the MU, she consumes one less Turkey sandwich MU/P = 8/4 =2

Consumer Choice

Income

- Increasing income allows consumers to buy more goods which means goods with lower MU/P ratios may be purchased.

Consumer Choice

Quantity	MU Tacos	MU/P	MU Soda	MU/P
1	24	8	14	7
2	18	6	8	4
3	15	5	6	3
4	6	2	2	1
Price	3		2	

Given a budget of $8, how many tacos & sodas are consumed?

Consumer Choice

- Solution Procedure
  - Select product with highest MU/P ratio
    - Buy one taco spending $3
  - Continue selecting products with next highest MU/P until income is spent.
    - Second purchase one soda, final purchase one more taco. Now all income has been spent: 2 tacos at $3 plus one soda of $2 equals $8.

Consumer Choice

- To derive the demand curve, we change the price of tacos to $2 and recalculate the result.

Consumer Choice

Quantity	MU Tacos	MU/P	MU Soda	MU/P
1	24	12*	14	7
2	18	9*	8	4
3	15	7.5 *	6	3
4	6	3	2	1
Price	2		2	

Given a Budget of $8

Consumer Choice

- As price decreases, MU/P increases, therefore, more of that product is bought causing MU to decrease and consequently, MU/P decreases back to the average.
- In this case, now 3 tacos are purchased and one soda.

Consumer Choice

- Deriving a demand curve using the marginal utility approach.
- By varying the price and observing the quantity, the demand curve can be derived.

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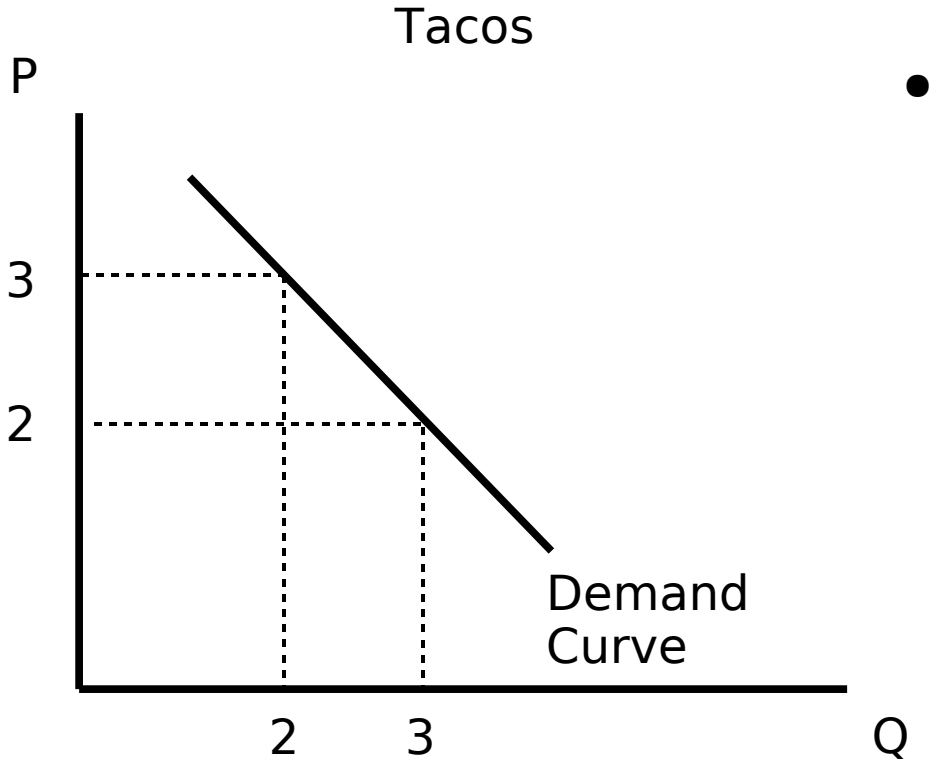

- Replotting results from marginal utility approach results in demand curve for tacos.

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- When a decrease (increase) in price causes more (less) of another good to be purchased, it is a complementary effect.

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Example:

- Suppose that the price of milk rises.
- Sales of coffee bean may decline as milk is the major ingredient in Cafe Con Leche.
- Since Cafe Con Leche is more expensive, less is sold, therefore, less coffee bean is sold.

Consumer Choice

- When a decrease (increase) in price causes less (more) of another good to be purchased, it is a substitution effect.

Consumer Choice

Example:

- If the price of soda rises, then coffee sales increase.
- Conversely, if the price of soda falls, then coffee sales fall.

Consumer Choice

- When a decrease (increase) in income causes less (more) of another good to be purchased, it is a normal income effect.

Consumer Choice

Example:

- When income increases, the sales of Lexus increase, when income drops, the sales of Lexus drop.

Consumer Choice

- When a decrease (increase) in income causes more (less) of another good to be purchased, it is an inferior income effect.

Consumer Choice

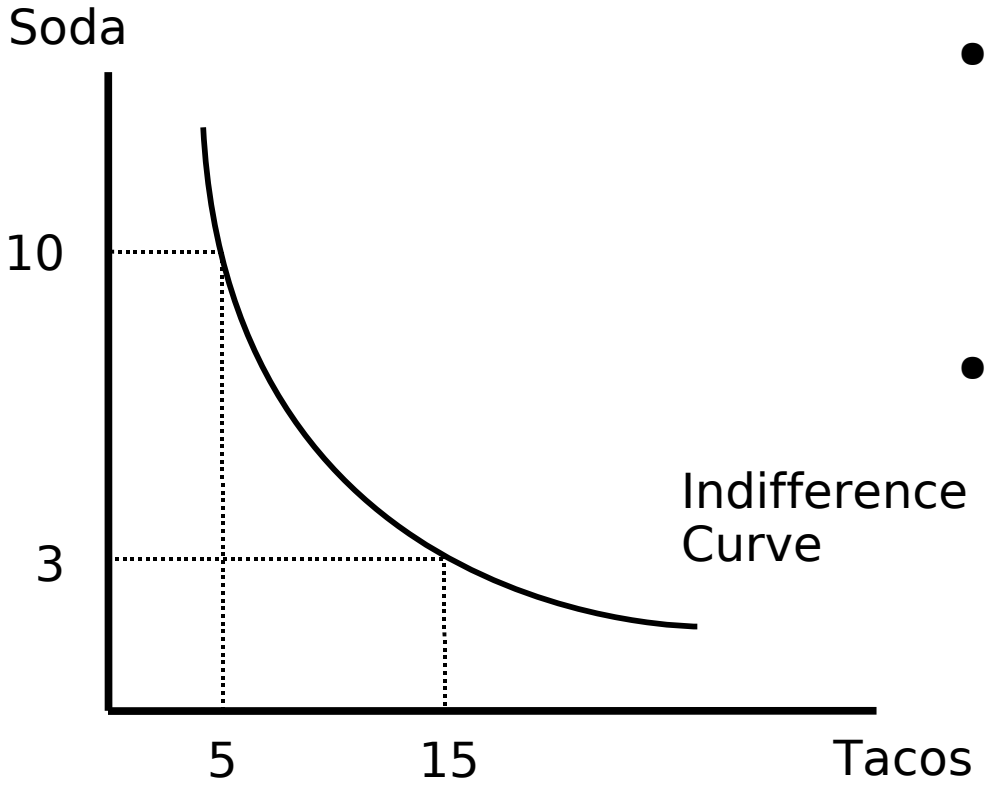
Example:

- When income drops, the number of Wal-Mart shoppers increase.
- When income increases, the number of Wal-Mart shoppers decrease.

Consumer Choice

- Indifference Curve Approach
  - An alternative method of explaining consumer choice is the indifference curve approach.
  - A graphical based approach.

Consumer Choice



Indifference Curve

- Each combination, point, on the curve has the same utility.
- Curves inward as more soda must be traded for few remaining tacos.

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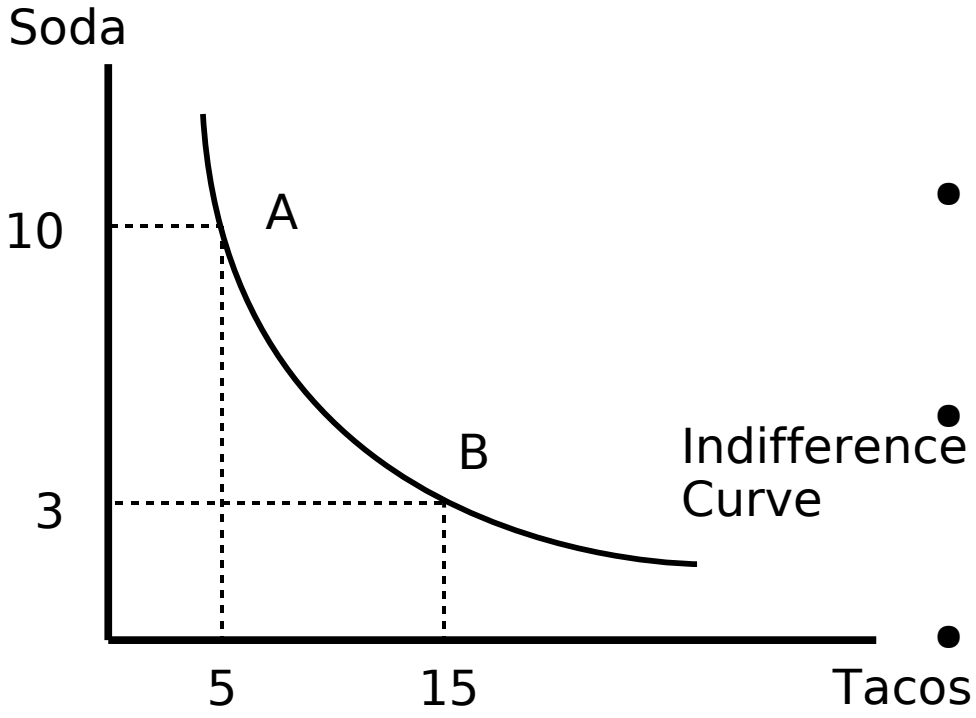

Marginal Rate of Technical Substitution

- slope of indifference curve
- tradeoff between goods
- (10-3)/(5-15) = -.7

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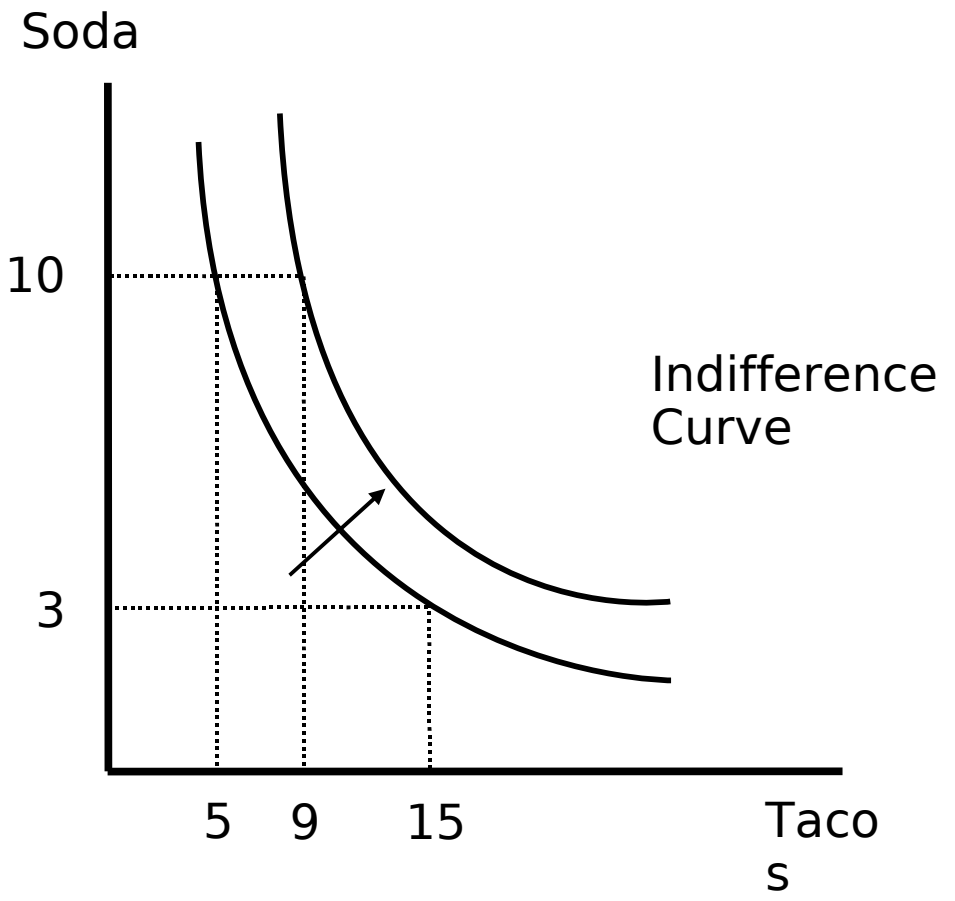

- Utility increases as indifference curves shift to the northeast.
- More a good can be consumed.

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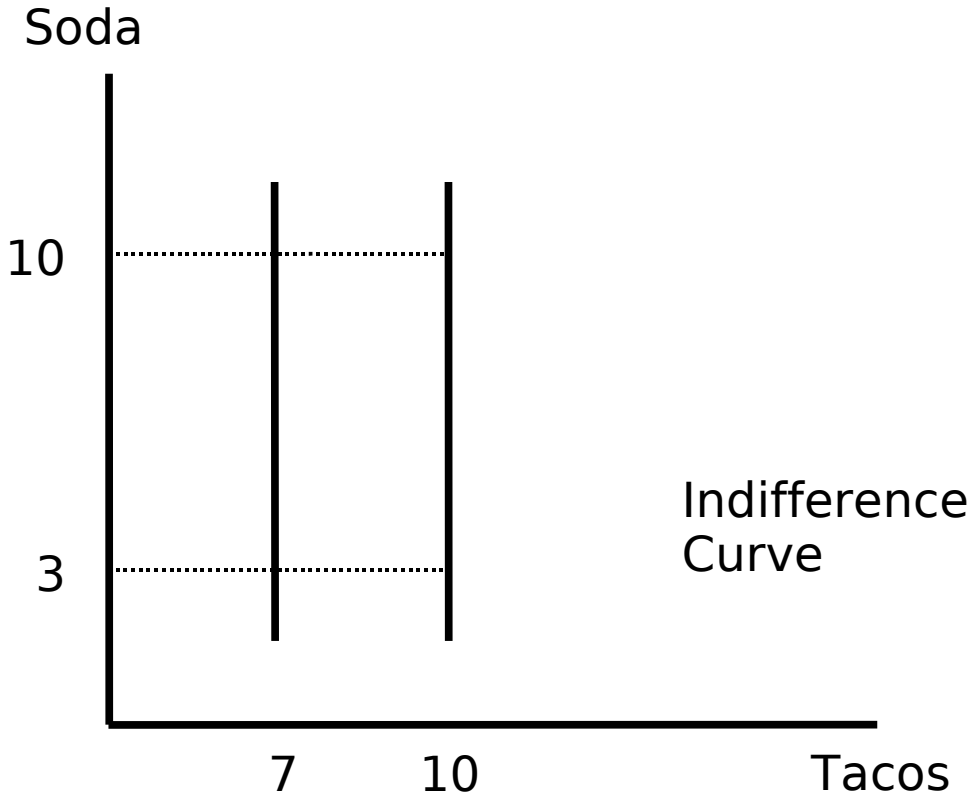
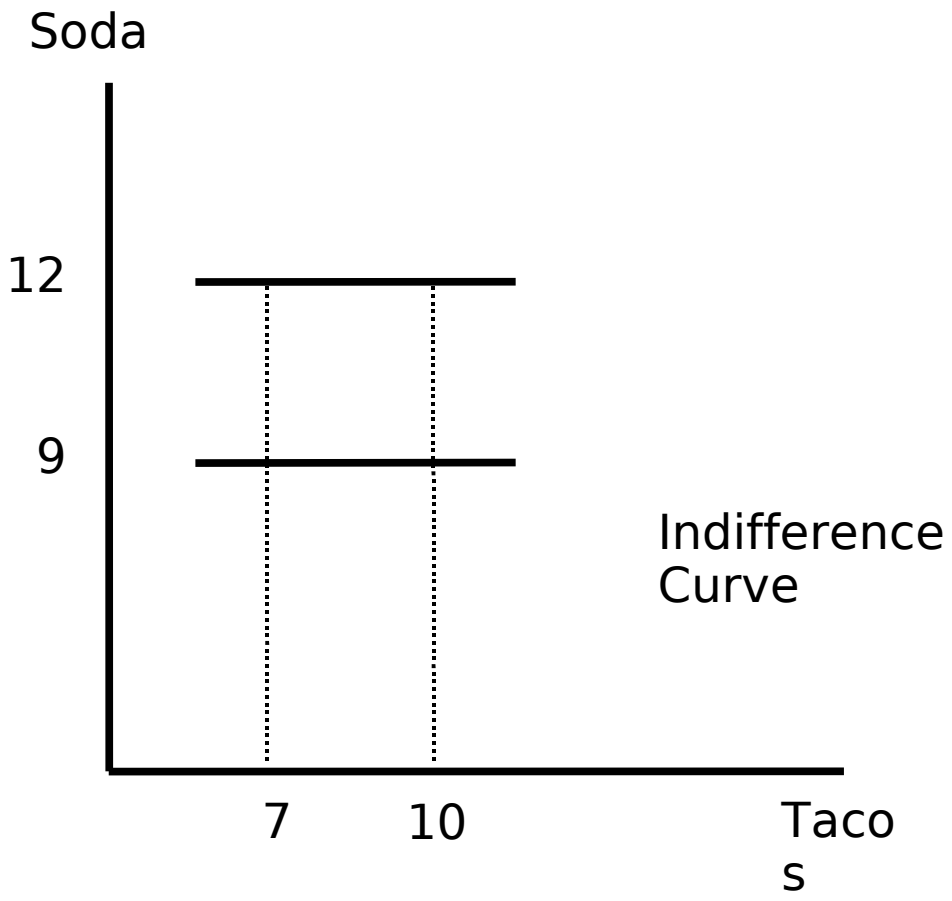


- When tacos are strongly preferred, it does not matter how many sodas are offered, utility is only increased when more tacos are consumed.

Consumer Choice



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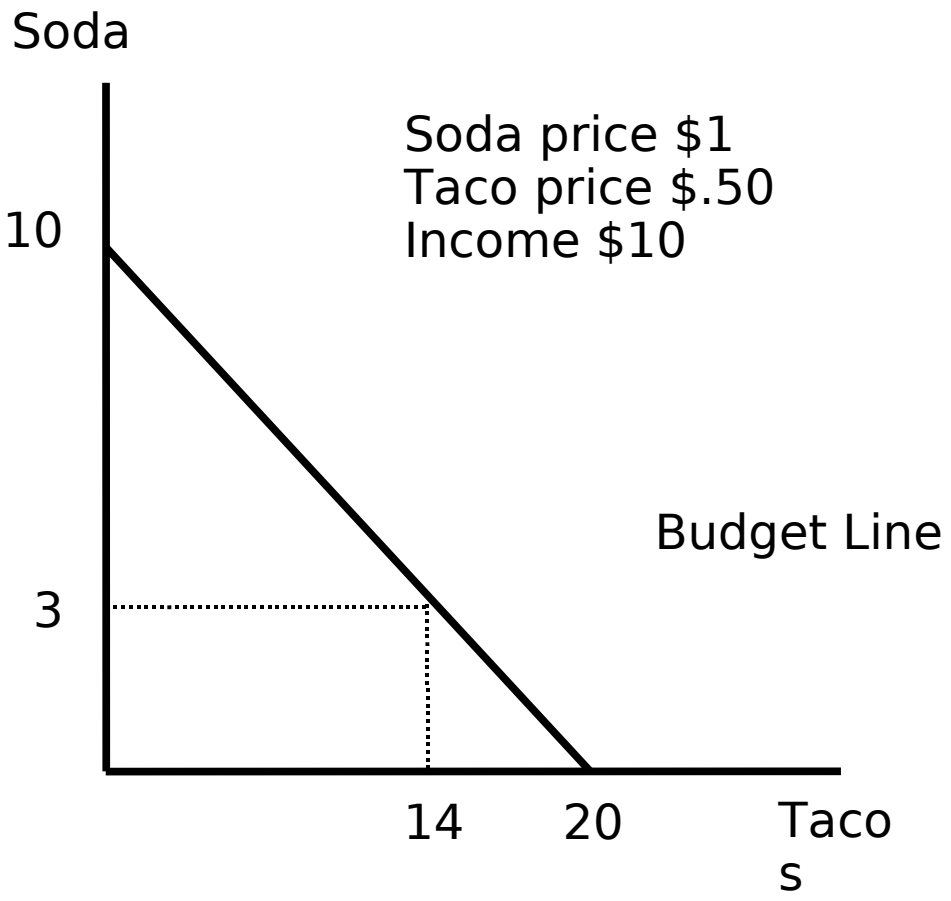
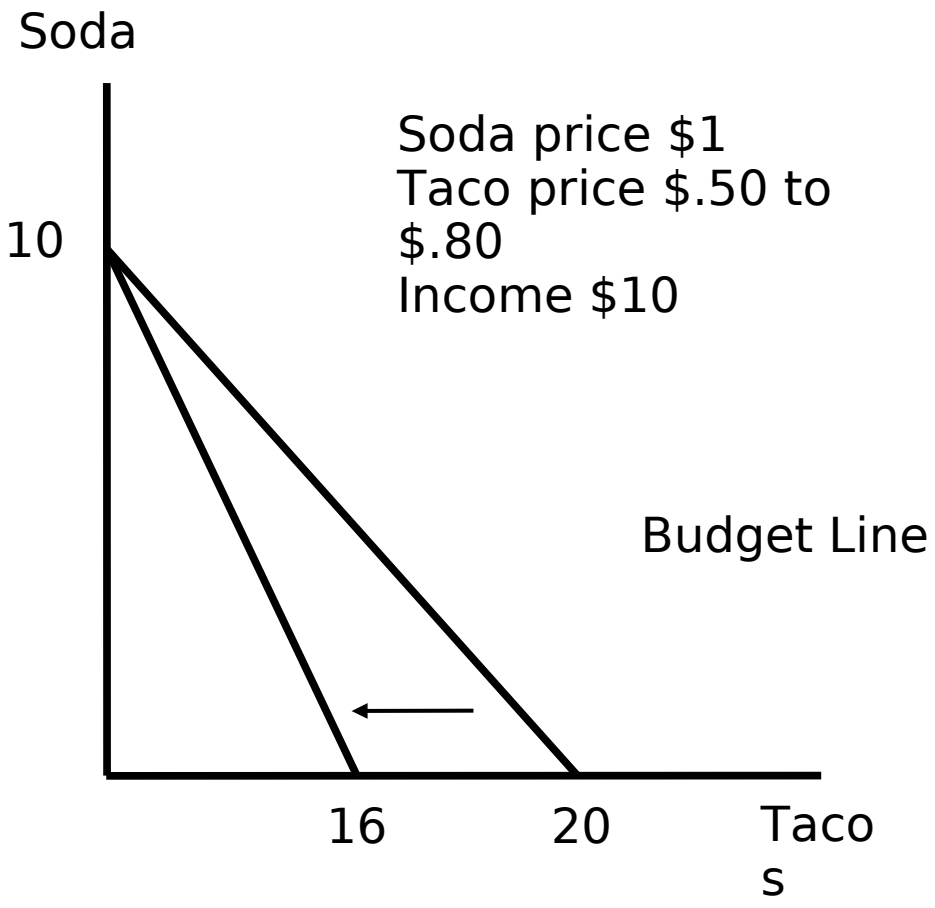


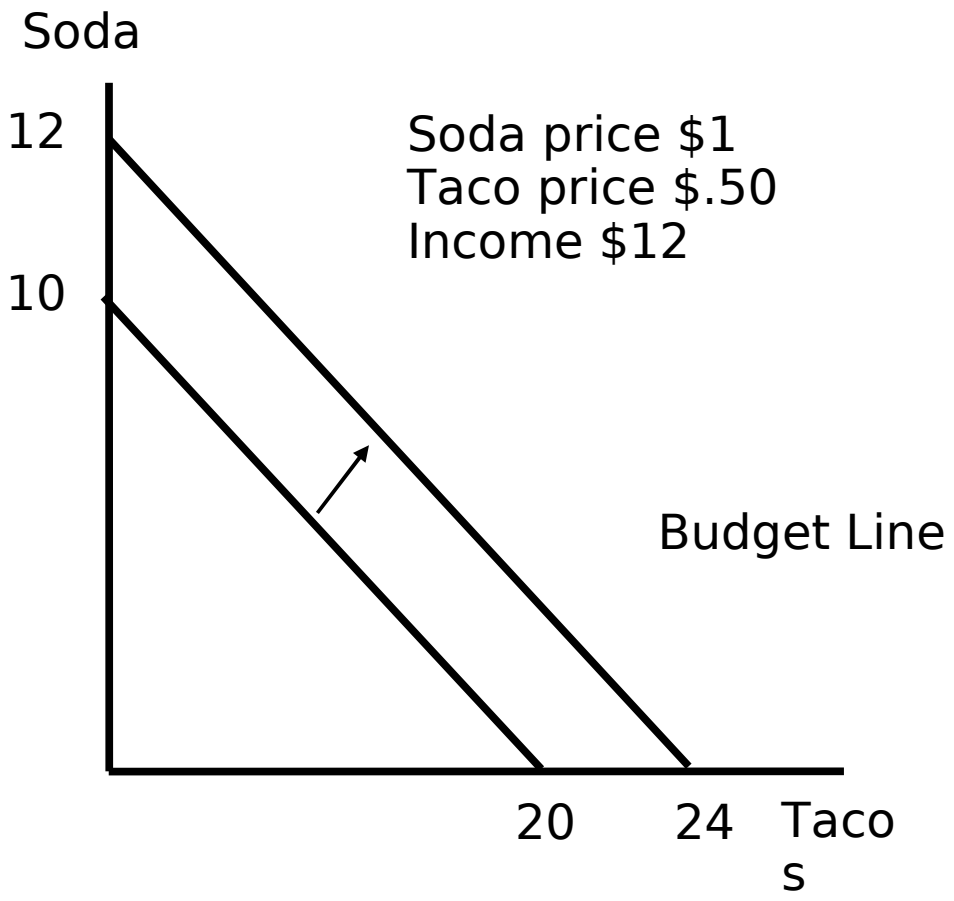
- Given an income of $10, a maximum of either 20 tacos or 10 sodas can be purchased.

Consumer Choice



- When the taco price increases from $.50 to $.80, then the budget line rotates inward.

Consumer Choice



- Increasing income from $10 to $12 shifts budget line outward.
- Either more soda or more tacos can be purchased.

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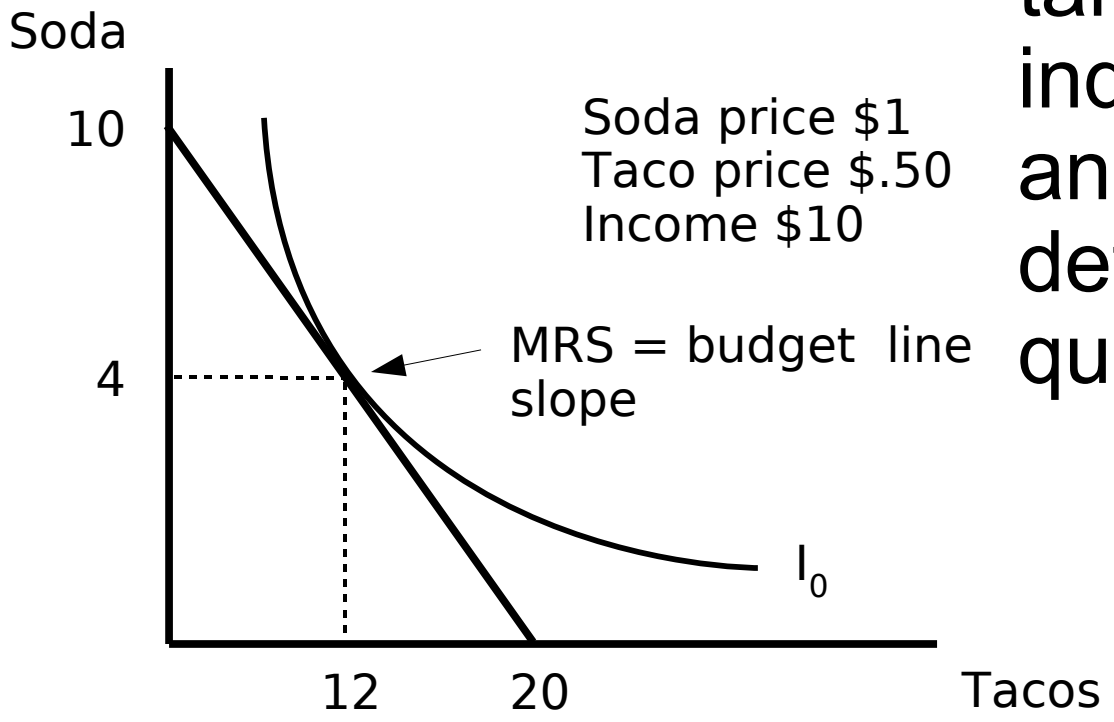

- The point of tangency of the indifference curve and the budget line determines the quantity consumed.

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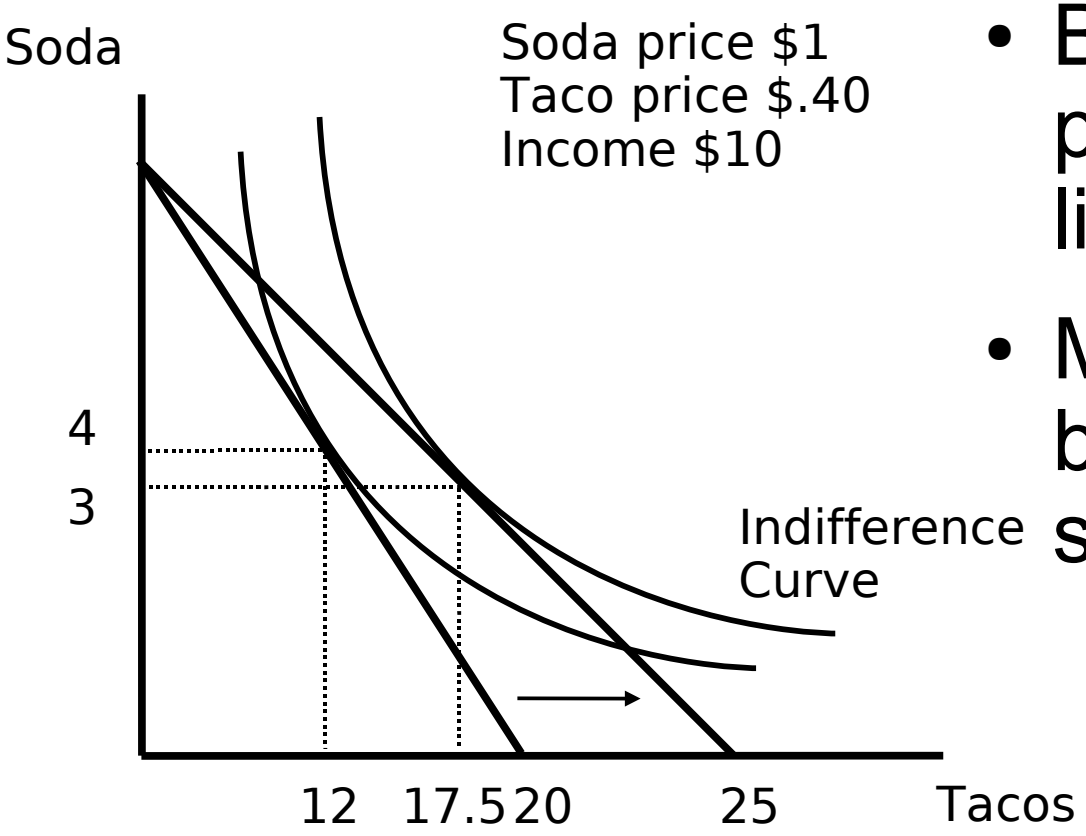
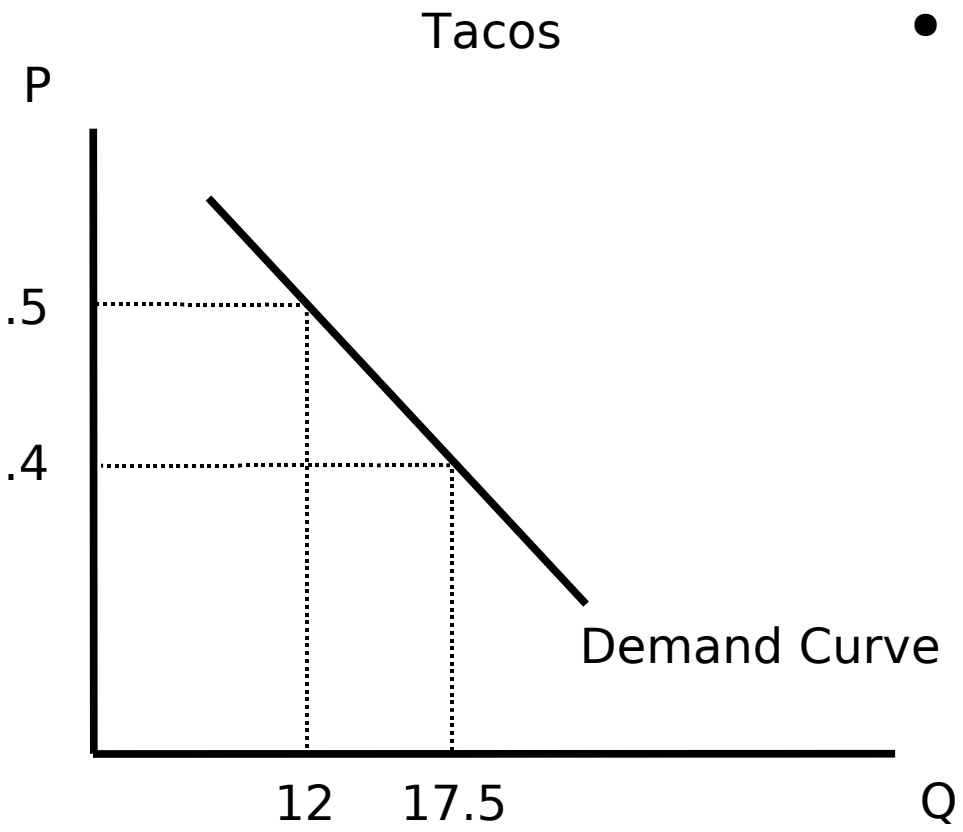


- By lowering taco price to .4, budget line rotates to right.
- More tacos are bought but less sodas are bought.

Consumer Choice

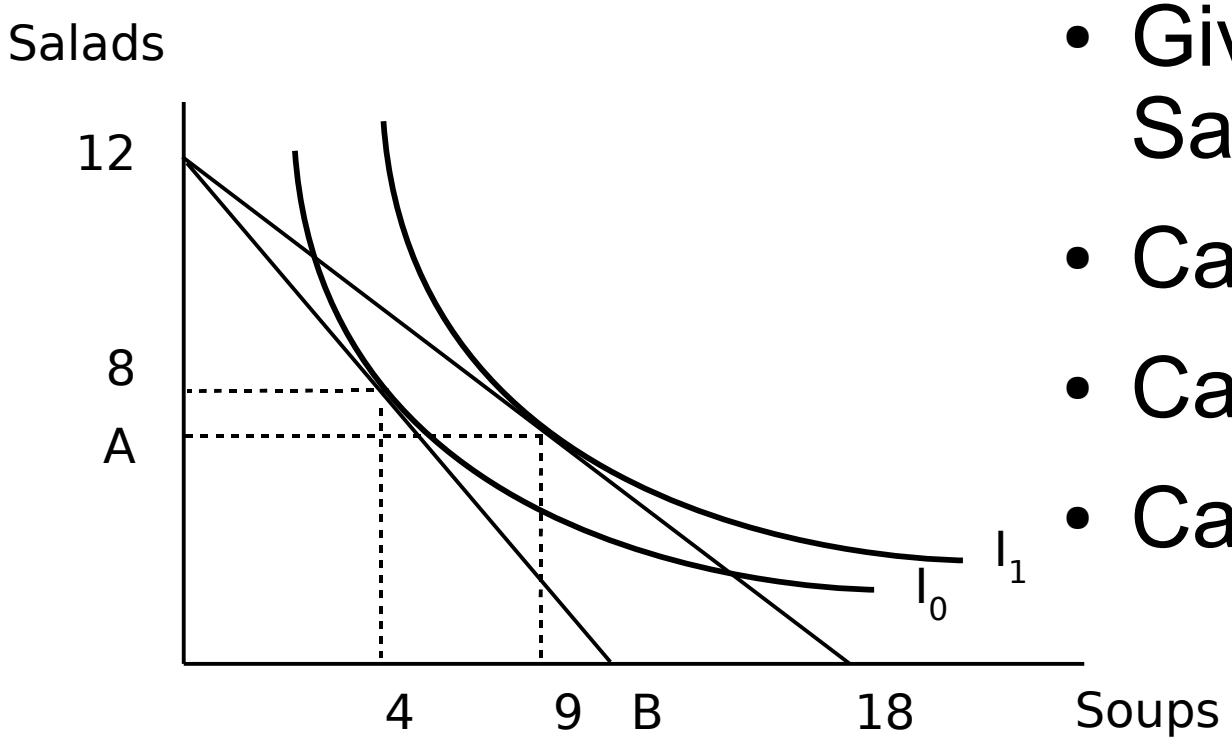


- Replotting results from indifference curve-budget line results in demand curve for tacos.

Consumer Choice

- Marketing attempts to increase utility, thereby, prompting consumers to buy more or at a higher price.

Consumer Choice



- Given Price of Salad is $3.
- Calculate income.
- Calculate A.
- Calculate B.

Consumer Choice

- Income = 12 salads * $3 = $36
- A = $36 -
- B =

Consumer Choice

- Substitution Effect
  - As price increases, the good becomes more expensive, thus other goods are substituted for it causing a fall in consumption.

Consumer Choice

- Income Effect
  - For income normal goods, increasing the price causes real income to drop, causing consumption to drop.

Consumer Choice

- The Bottom Line on Consumer Choice
  - Know your customer.
  - Know why they buy your product.

The End