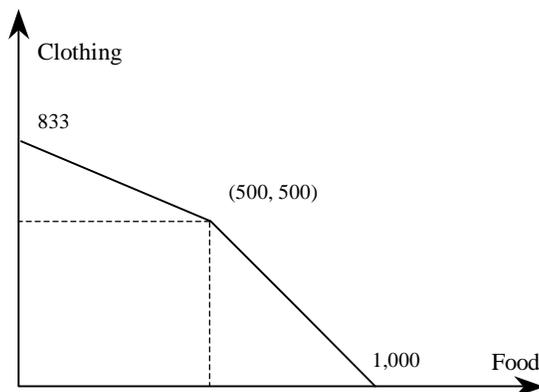


### Production Possibilities

Suppose that there are only two goods that are made, that is food and clothing. And suppose that there is a total of 2,000 units of labor and it takes 2 units of labor to make 1 unit of food, and it takes 3 units of labor to make 1 unit of clothing. There is also a new technology that was just invented and now up to 500 units of clothing can be made using only 2 units of labor of each unit of clothing.

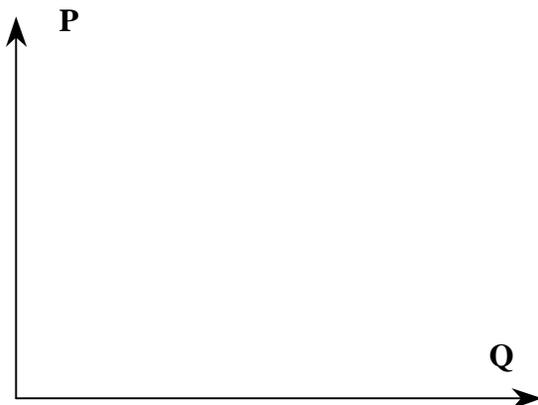
- What would the graph of the P-P curve look like? Concave with a kink
- What is the maximum number of units of food that can be made? 1000
- What is the maximum number of units of clothing that can be made? 833
- Is the graph linear, concave, or convex? Concave
- Is opportunity cost of clothing constant, increasing or decreasing? \_\_\_\_\_  
what is it? 1 unit of food for the first 500, 3/2 after 500.
- Is opportunity cost of food constant, increasing or decreasing? \_\_\_\_\_  
what is it? 2/3 unit of clothing for the 500, 1 after 500



### Supply and Demand:

The supply curve of a good is what quantity of that good producers would produce if the price were  $p$ .

The demand curve of a good is what quantity of a good consumers would want to buy if the price of that good were  $p$ .



<u>Supply Shifts</u>	<u>Demand Shifts</u>	<u>Price</u>	<u>Quantity</u>
Left	No Shift	Up	Down
Right	No Shift	Down	<b>Up</b>
No Shift	Up	<b>Up</b>	Up
No Shift	Down	Down	<b>Down</b>
Left	Up	Up	<b>Can't Tell</b>
Left	Down	Can't Tell	<b>Down</b>
Right	Up	Can't Tell	<b>Up</b>
Right	Down	Down	<b>Can't Tell</b>

### Marginal Utility

#### Important points:

- Utility is a scale internal to one person, one cannot compare the utility values for different people, for example if Jim has get a utility of 20 from A and Jill gets a utility of 5 we **cannot** say that Jim gets more utility from A than Jill
- Utility is only an index  $U(A) > U(B)$  only says that the utility from A is greater than that from B, but not “by how much”. It only gives order, A is preferred to B.
- Marginal Utility of good A is the utility received from the last unit of good A.

#### Important Assumptions:

- “More is better” adding one unit of anything to a consumption bundle makes it more preferable.
- Diminishing Marginal Utility: the more units of a good a person has that less utility she/he will get from an extra unit of that good.

$$\frac{MU_d}{P_d} = \frac{MU_w}{P_w}$$

Suppose a family buys 50 bagels a month, and 8 pizzas a month, and the price of a pizza is \$10, and a price of a bagel is 50cents. Assume the family gets as much utility from a 51<sup>st</sup> bagel, as from the 50<sup>th</sup> bagel. And that they get as much utility from a 9<sup>th</sup> bagel as from the 8<sup>th</sup> bagel

What can you tell about the utility the family gets from the 8<sup>th</sup> pizza vs. the utility the family gets from the 50<sup>th</sup> bagel. **Since  $MU_p/MU_b = P_p/P_b = 20$  they must get 20 times more utility from the 8<sup>th</sup> pizza than from the 50<sup>th</sup> bagel**

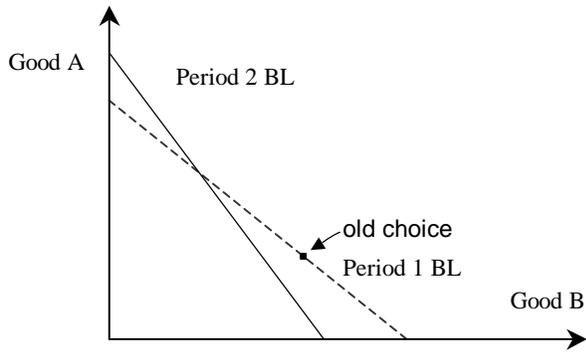
Would the family get more utility from a 51<sup>st</sup> bagel or from a 9<sup>th</sup> pizza? **9<sup>th</sup> pizza**

From which good does the family get more total utility? **Can't Tell anything about the total utility, only the marginal utility.**

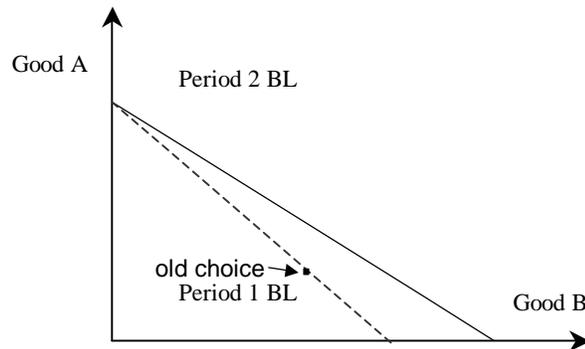
## Being Better off

*You are better off in period 2 if in period 2 you can still buy the same bundle you bought in period 1, but you choose not to in period 2.*

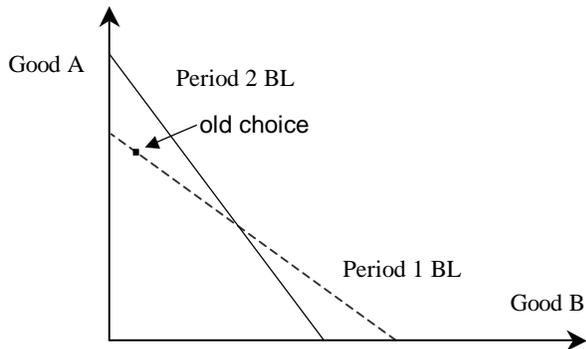
For each graph identify whether or not the person is better off, or worse off in period 2 (if possible), and if there was an increase, or decrease in real income (if there was one).



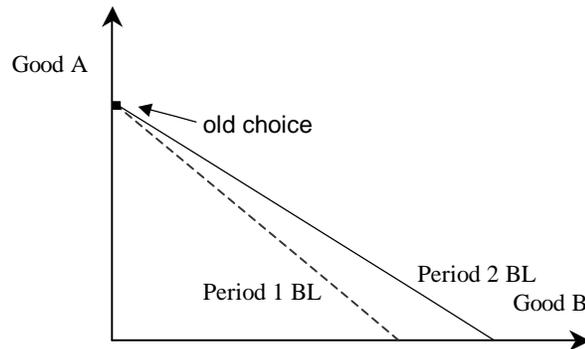
Can't Tell,



Better Off, **real increase in income**



Better Off



Can't Tell, depends on new choice,  
**real increase in income**

Given the following budget curves, could there be people who are better off in the first period? **Yes, if they chose the somewhere along the dashe line in period 1 they would be better off in period 2, if they chose somewhere along they would be better off in period 1.**

Could there be people who are better off in the second period? **See above**

