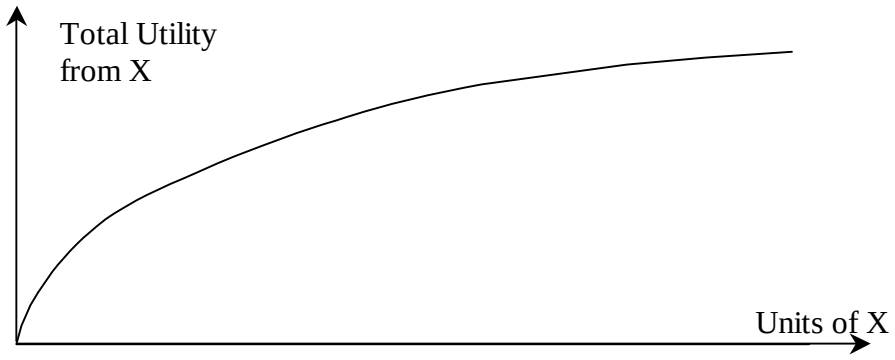
Marginal Utility

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.



Suppose you are in a dessert and you don't have any water what would your utility be from one pint of water?

Units of Water	Marginal Utility from the nth unit of water
1	100,000
2	10,000
3	10
4	2
5	1

Units of Diamonds	Marginal Utility from the nth unit of diamonds
1	60,000
2	55,000
3	52,000
4	50,000
5	40,000

Now what if you had $20,003 dollars in your pocket, (I know this sounds farfetched) and there is someone who is selling both water and diamonds at the prices:

P_d = $5000
P_w = $1

With P_d being the price of 1 unit of diamonds and P_w being the price of one unit of water. What is the best way to spend your money given the utility schedule from before?

_____ units of diamonds
_____ units of water

to maximize utility the following equation has to be true $\frac{MU_d}{P_d} = \frac{MU_w}{P_w}$ the utility from the last dollar spend must be the _____ for both goods, otherwise one could _____ their utility by buying a different bundle

$$\frac{\_\_\_\_\_}{\_\_\_\_\_} = \frac{P_d}{P_w}$$

a utility maximizing consumer always chooses goods such that the above equalities _____;
deviating from this can only _____ the consumer's _____

What gives more utility the diamonds or the water?
What if we changed the MU of the first unit of water to 1,000,000, 10^9, 10^{100} or ∞? Would it change the allocation of money? What about the total utility?

The total money spent tells you <u>nothing</u> about the total utility.

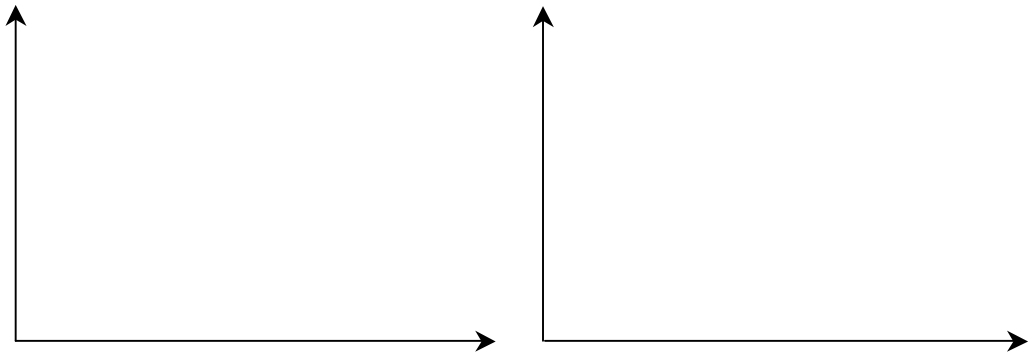
Budget Curves

Suppose you have $300 to spend in one month, and you spend it all on pizza and video games.

Pizza costs P_p = $10 a unit and video games cost P_v = $50 dollars a unit.

Draw a budget curve below:

(1) What happens if the price of pizza goes up 10%?
(2) What happens if the price of pizza increases by 10%, but the price of video games decreases by 5%?



increase in real income: *An increase in real income has resulted when prices or income shift such that every bundle the consumer could buy before the shift can still be bought and there are others that can now be bought that were too expensive before the shift.*

Was there a decrease in real income, increase in real income, or neither in (1)?

_____

Was there a decrease in real income, increase in real income, or neither in (2)?

_____

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).