THEORY OF
CONSUMER
BEHAVIOUR

CONSUMER'S PROBLEM

1. Object

- maximization of total utility (satisfaction)
- *Utility* is a measure of the relative happiness or satisfaction gained by consuming different bundles of goods and services.
- Concept of **cardinal utility** assumes that measurement of utility of different commodities is possible. (e.g. if milk is equal 100 units, than consumption of a beer may give … units).

2. Constraint

- limited financial resources (income)

3. Decision variable

- quantity purchased using limited resources

TOTAL UTILITY

- represents overall satisfaction of consumer's needs coming from consumption of certain amount of some commodity
- With increasing consumption the TU is increasing as well
- At a certain point TU will reach the maximum point called **Saturation**
- After attaining saturation point, continued consumption decreases TU.
- $TU_n = \sum_{i=1}^{n} C_i$
  - TU_n = TU of *n* units
  - C_i – utility of *i*-th unit
  - n = total number of units consumed

TU GRAPH

| Q	Total Utility
0	0
1	10
2	17
3	21
4	23
5	23

Q
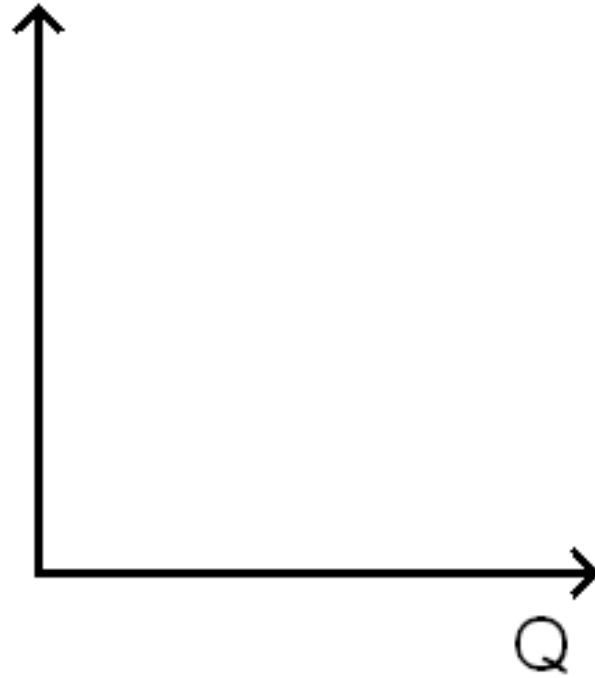
MARGINAL UTILITY

is an additional satisfaction of individual's need coming from consumption of one additional unit of a good.

- ***Law of diminishing marginal utility:*** the marginal utility coming from consumption of some good decreases as the amount of consumed good increases. The subjective utility of goods decreases with increasing availability

- ***The law of equilibrium in marginal utilities:*** maximum consumer utlity is defined as a moment when marginal utilities of all concerned consumed commodities are equal, i.e. the amount of satisfaction coming from every additional money spent on consumption is equal for all commodities

- To reach maximum utility a consumer stops consumption of some good at the point when the utility is equal to the consumption of other good. In other words, consumption of good A stops when the marginal utility is equal to consumption of B, further consumption of good A will yield less benefit.

MU GRAPH

Q	Total Utility	Marginal Utility
0	0	0
1	10	10
2	17	7
3	21	4
4	23	2
5	23	0

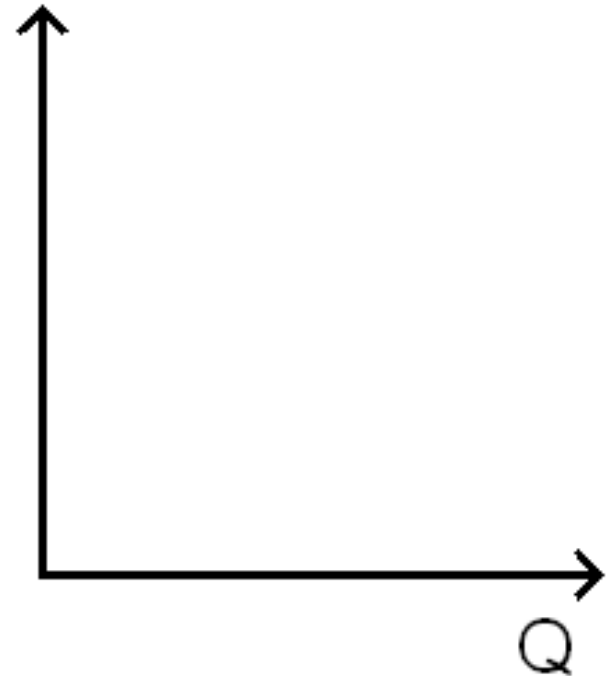$$MU = \frac{\Delta TU}{\Delta Q}$$

Q
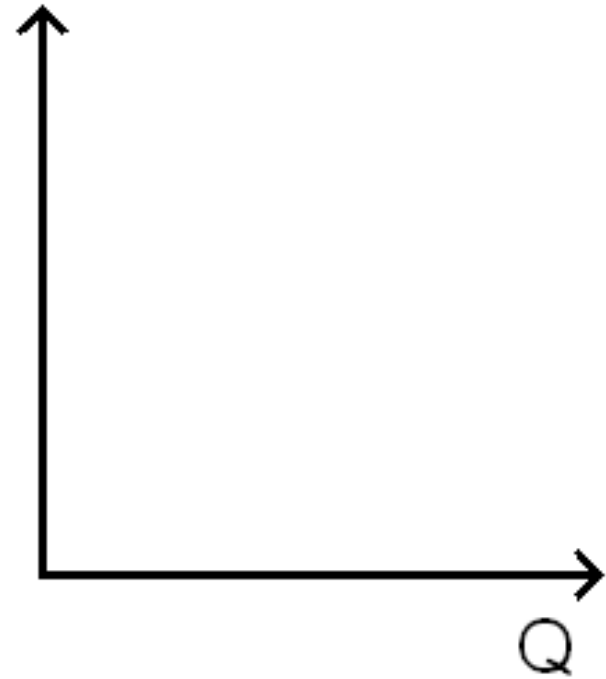
BENEFIT

We have to speak about prices which express the willingness of consumers to pay certain amount of money for certain quantity of good or a service. In such case we're speaking about total benefit and marginal benefit.

- **Total benefit** is maximum amount of money that a consumer is willing to pay to achieve certain amount of a good or a service.

- **Marginal benefit** is the maximum amount of money a consumer is willing to pay to achieve one additional unit of a good.

- *The law of declining marginal benefit:* people spend less money units for additional units of goods since marginal utility coming from every additional unit is lower than marginal utility from previous unit. The budget is assumed to be fixed at this theory. Rational consumer stops purchasing when the marginal benefit of one unit of a good gets lower than its marginal costs.
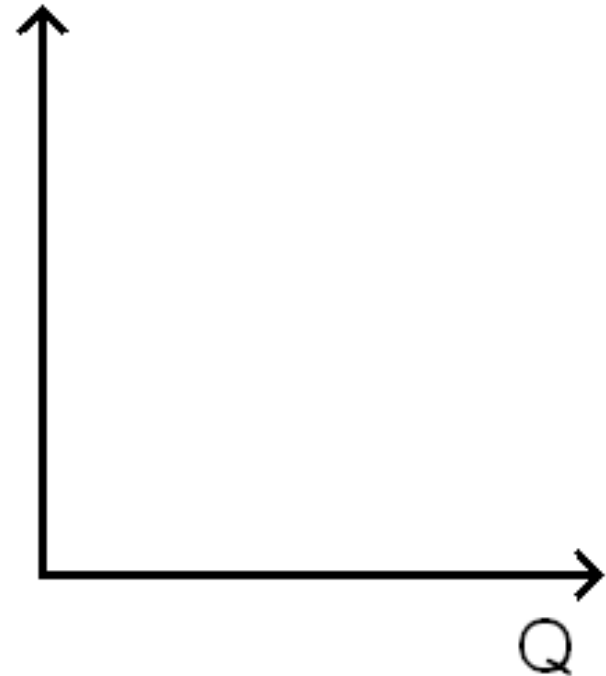
TOTAL BENEFIT

Q (Peaces of clothing)	Total Benefit (CZK)	Marginal Benefit (CZK/Pc)
1	1500	1500
2	2500	1000
3	3200	700
4	3700	500
5	4000	300
6	4100	100
7	4100	0

Q

MARGINAL BENEFIT

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Q

NET BENEFIT

Net benefit is the total benefit coming from achieved good minus costs of its acquisition.

Q Clothing	Marginal benefit (CZK/Pc)	Price (CZK/PC)	Net benefit
1	1500	900	600
2	1000	900	100
3	700	900	-200
4	500	900	-400
5	300	900	-600
6	100	900	-800
7	0	900	-900

CONSUMER SURPLUS

is a sum of all net benefits from a zero quantity to consumed quantity.

Q (Peaces of Clothing)	MB	NB	CS
1	1500	600	600
2	1000	100	700
3	700	-200	500
4	500	-400	100
5	300	-600	-500

Q
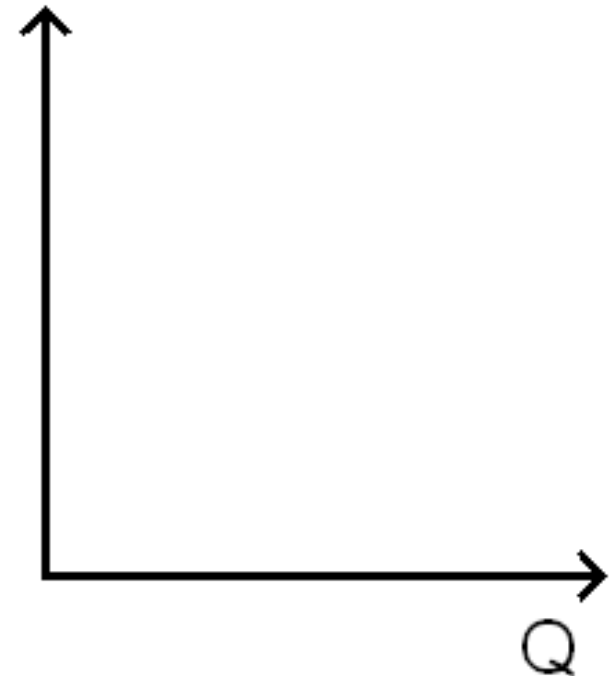
PARADOX OF VALUE

Paradox of value expresses the fact that people are willing to pay only little money to achieve goods that bring great total benefit.

- Some goods have great value (e.g. water or air – we cannot live without them) and they're practically for free, while commodities of poor use (e.g. brilliants) are traded for immense amount of money.

**Influence of Change in Income on Amount of Consumed Goods**

- *For normal (classic) goods:* with an increasing budget the individual's willingness to pay for them increases.

- *For inferior goods:* the consumer behavior is reverse. Consumers' willingness to pay for the good decreases with increasing budget and the substitution effect takes place.

INFLUENCE OF CHANGE IN INCOME ON AMOUNT OF CONSUMED GOODS

Normal Goods

Inferior Goods

Q

Q
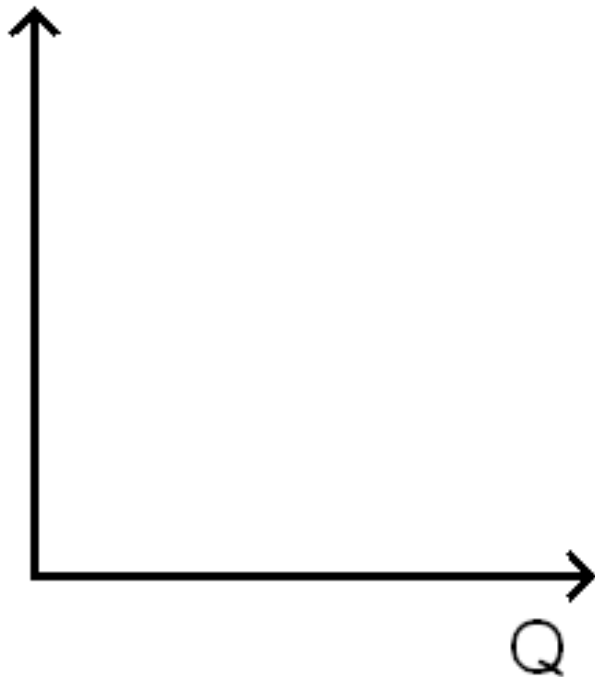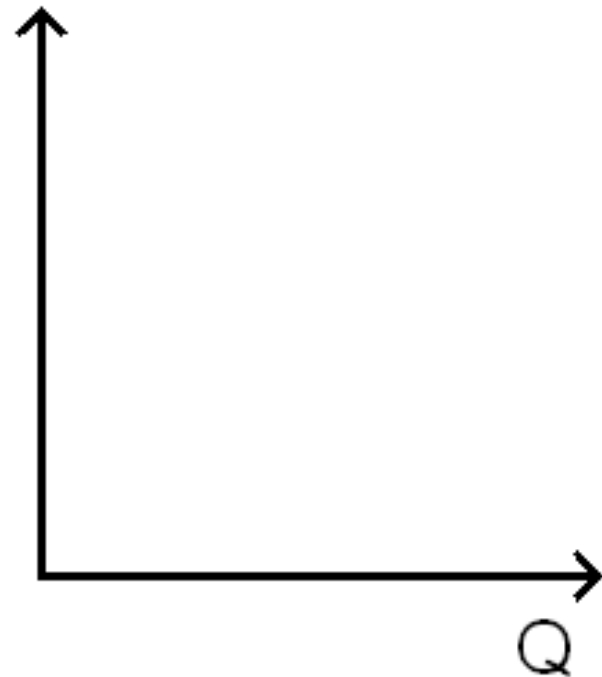
INDIFFERENCE CURVE ANALYSIS

Consumer's equilibrium on the market of goods and services can be expressed graphically by means of indifference curve and budget line. A consumer analysis using indifference curves represents behavior of a consumer who chooses between two alternatives of consumption.

Indifference curve is a set of different market baskets (usually of two commodities) that provides to the consumer equal utility.

Let's suppose market basket of commodities A and B. With unchanged total utility the increase of amount of commodity A is compensated by decrease of amount of commodity B. The slope of curve is denoted as marginal rate of substitution (MRS).

$$MRS_{X,Y} = \frac{\Delta Y}{\Delta X}$$

INDIFFERENCE CURVE ANALYSIS

One indifference curve comprises all market baskets with equal utility. The baskets with lower utility lie below the curve, baskets with higher utility lie above the curve. The set of all indifference lines defining all levels of consumer utility form indifference map.

Constrained budget is a definite sum of money a consumer has at disposal over certain period to purchase goods, i.e. an income with certain purchase power.

If we assume: the equality of incomes and expenditures; the whole budget is spent on consumption of goods X and Y. Than:

$$I = P_x * Q_x + P_y * Q_y$$

- where: I … income; P … unit price of good X and Y, Q … quantity of goods

INDIFFERENCE CURVE ANALYSIS

All possible purchase combinations can be calculated and graphically represented. The line comprising all purchase combinations with given budget and a condition of equality of incomes and expenditures is called budget line.

The combinations bellow the line are made with unspent part of the budget, combinations above the budget line cannot be made (require more money).

Q