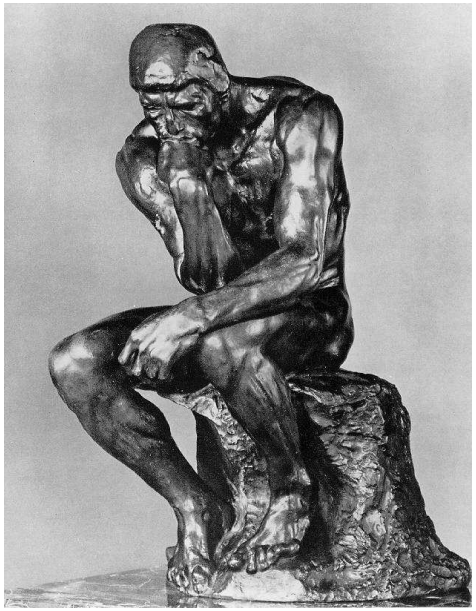
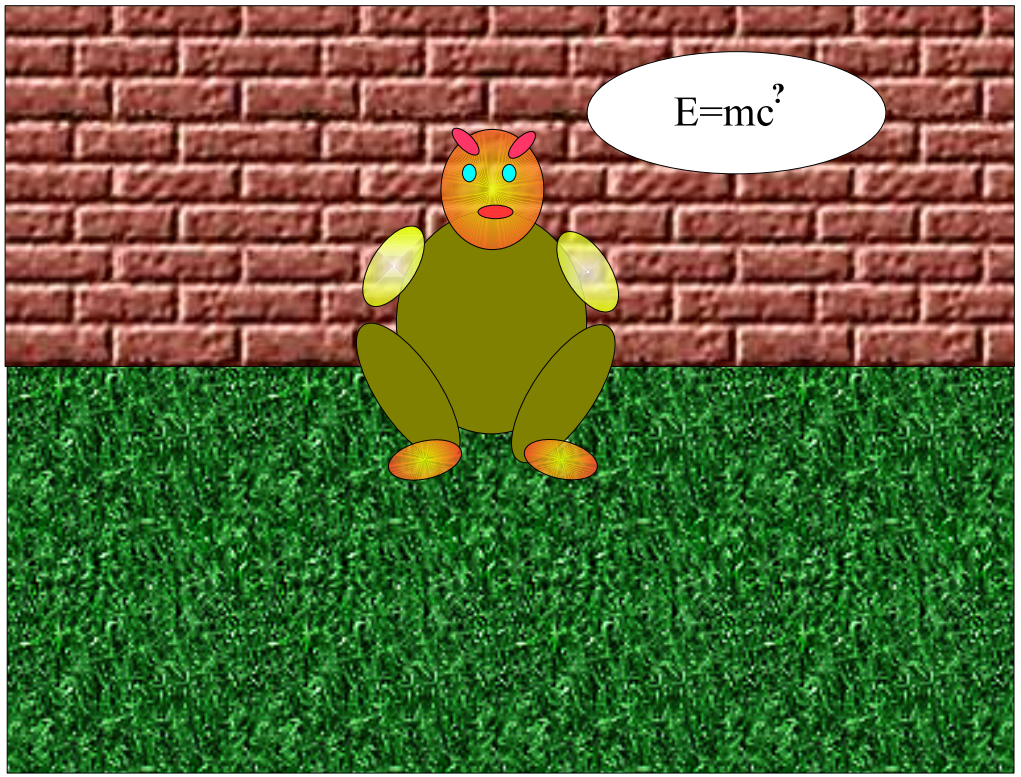
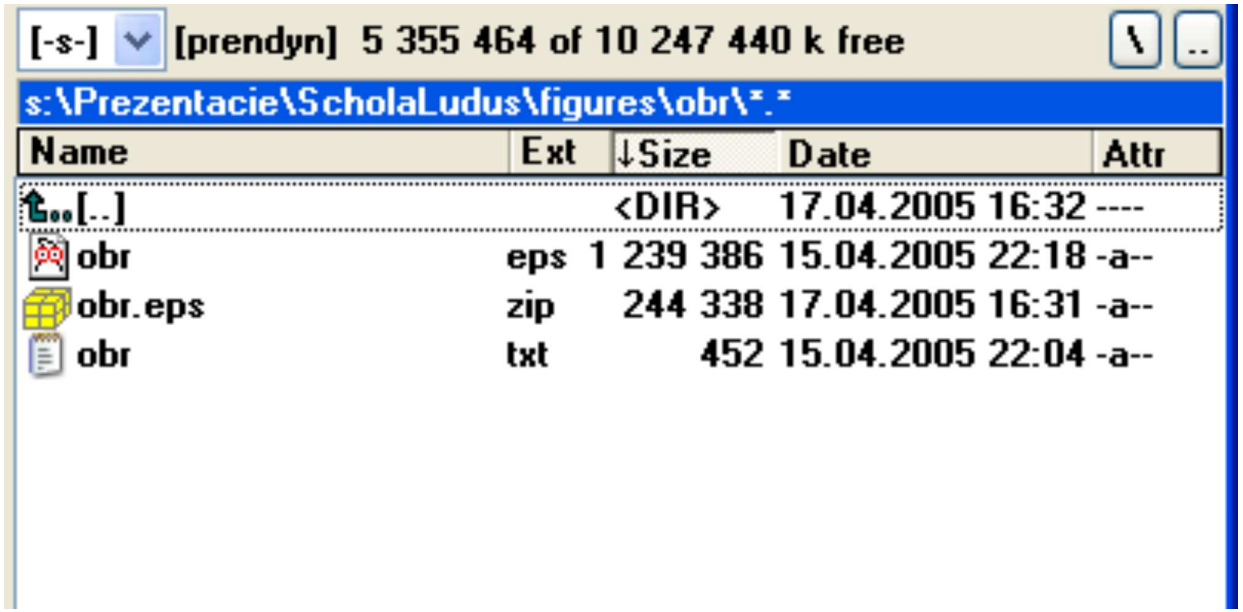
Čo je fyzikálna teória



Prvá trieda: Na obrázku vidím ...



zipujeme, zipujeme...



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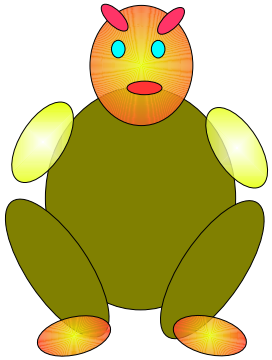

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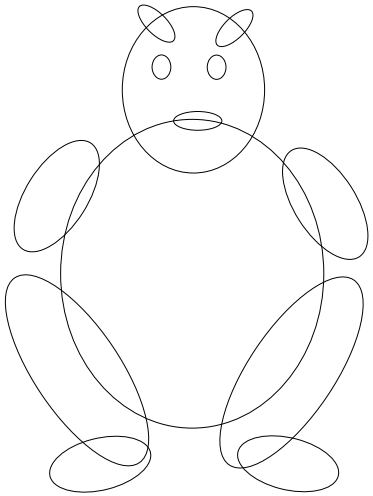

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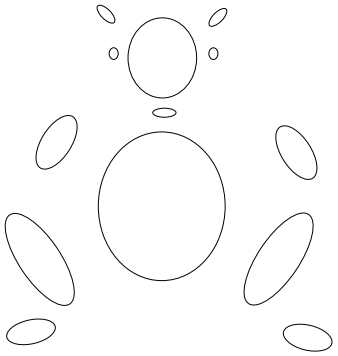

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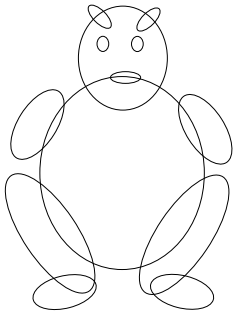

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Ellipse(5.41,2.58,1.03,1.21,0)
Ellipse(4.56,4.62,1.04,1.39,33.94)
Ellipse(6.12,4.63,1.04,1.39,146.08)
Ellipse(4.73,5.30,0.73,0.41,288.17)
Ellipse(6.09,5.29,0.73,0.41,251.76)
Ellipse(4.41,3.35,0.62,0.81,327.57)
Ellipse(6.36,3.41,0.62,0.81,212.48)
Ellipse(5.44,2.81,0.35,0.14,0)
Ellipse(5.18,2.42,0.14,0.18,0)
Ellipse(5.58,2.42,0.14,01.8,0)
Ellipse(5.14,2.10,0.27,0.27,315.0)
Ellipse(5.70,2.14,0.27,0.27,45.0)
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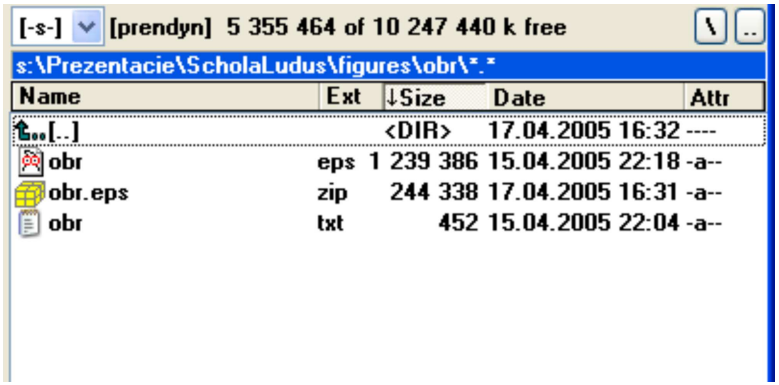
zipujeme, zipujeme...

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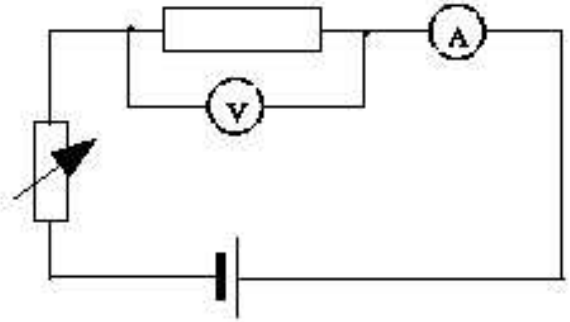
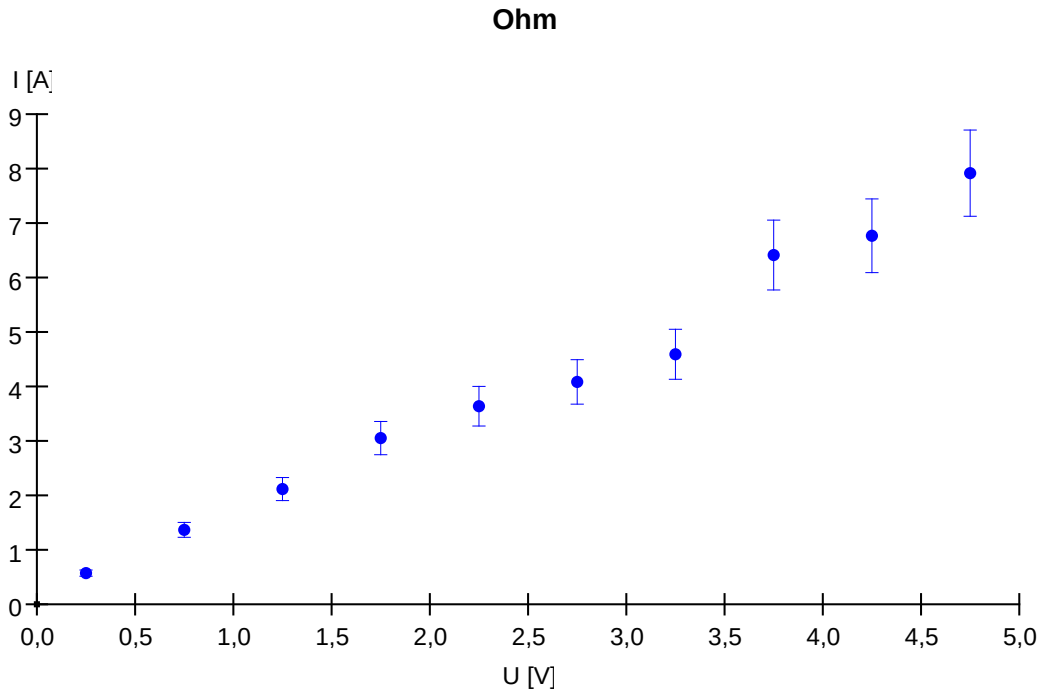
Ellipse(5.70,2.14,0.27,0.27,45.0)
```

Ohmov zákon

Georg Simon Ohm
(1787-1854)



Ohmov zákon ?



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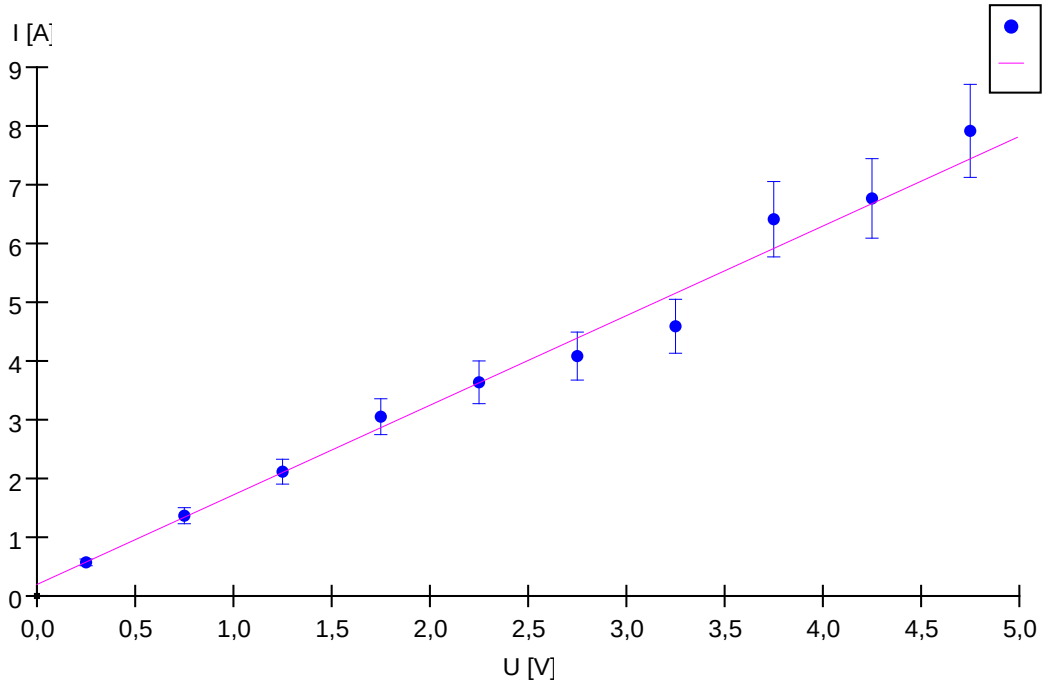
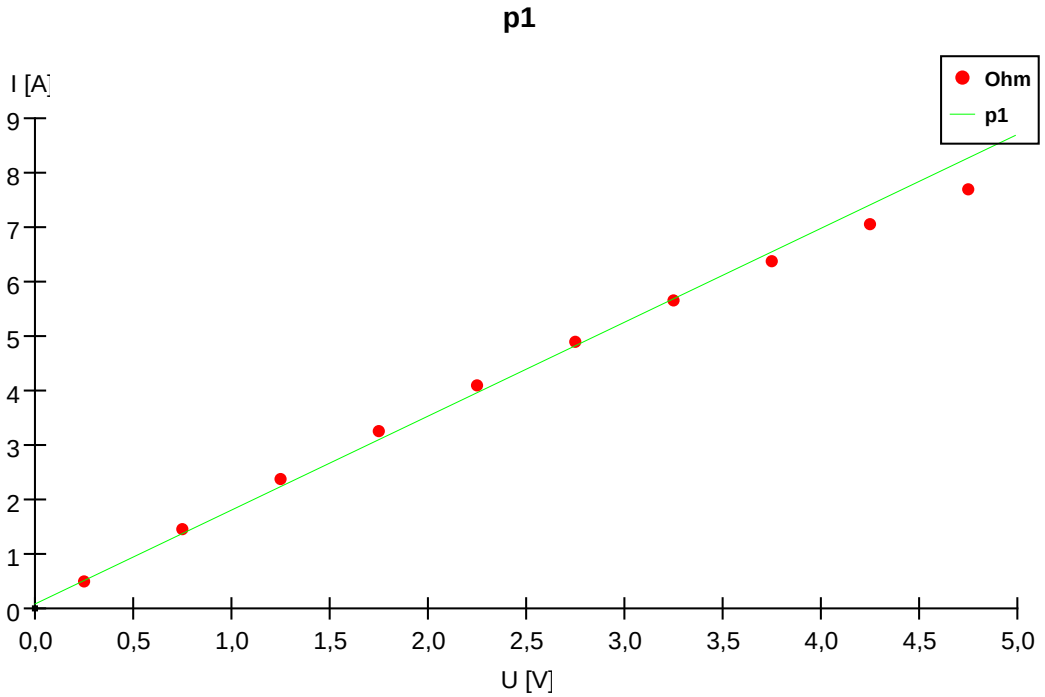
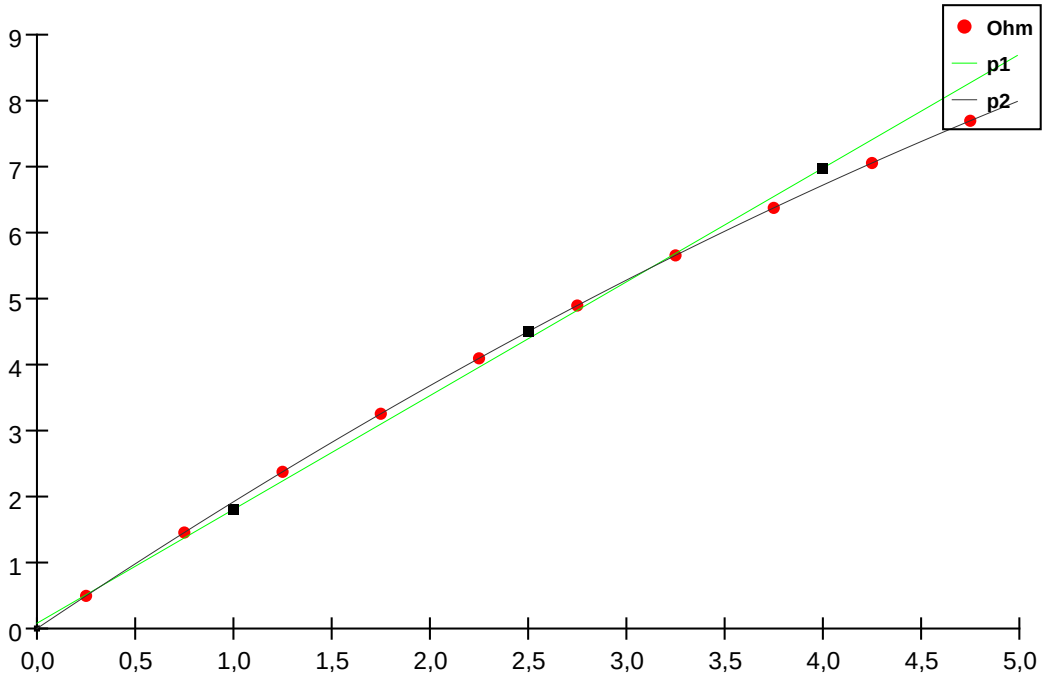


$$I = \frac{1}{R}U$$

Ohmov zákon ?

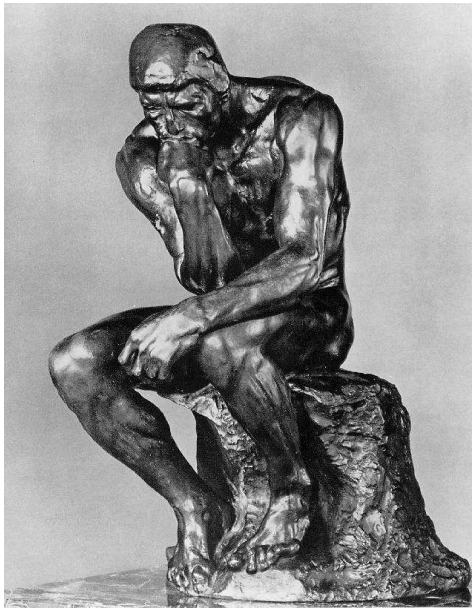


”Ohmov” zákon

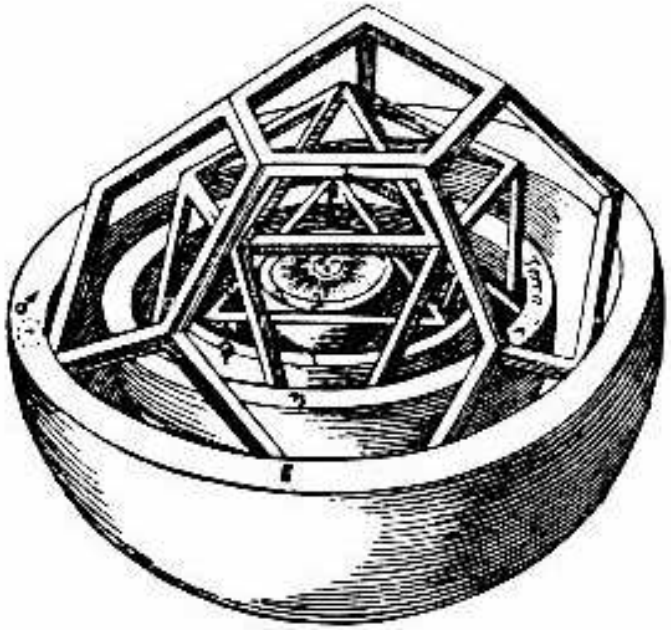


$$I = \frac{1}{R}(U - \alpha U^2)$$

Čo je fyzikálna teória

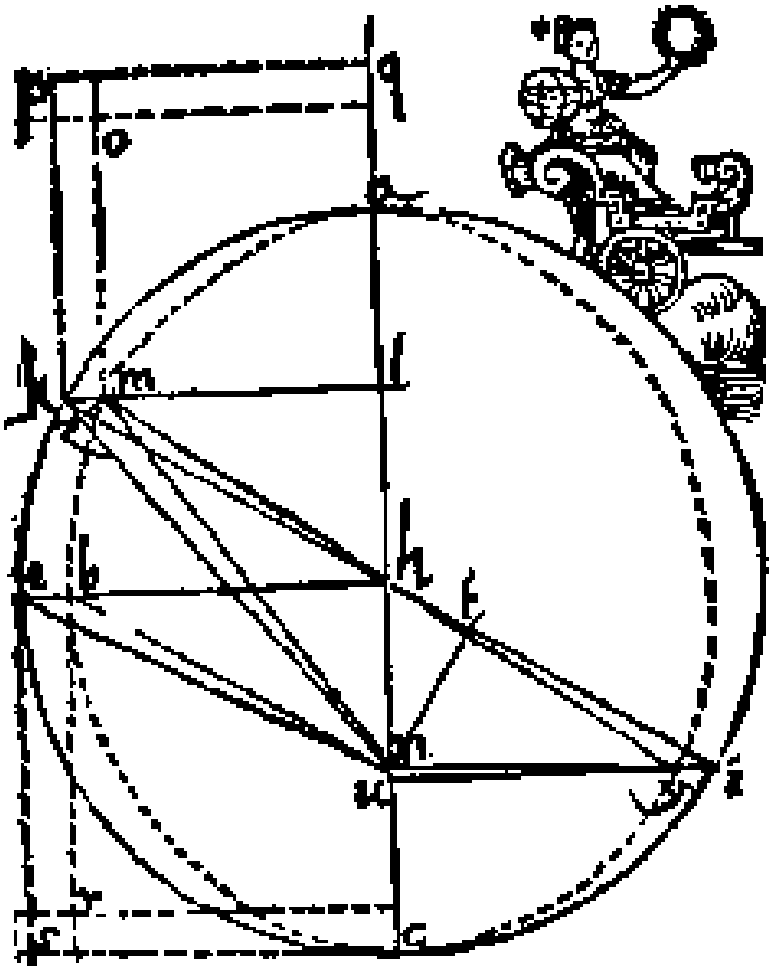


Kepler 1596 Mysterium Cosmographicum



QUADRANS MURALIS SIVE TICHO-
NICUS

Kepler Astronomia Nuova 1609



Merač a Zipovač

Ako v stredoveku dovolili Stvoriteľovi slobodne tvoriť

- Pierre Abelard 1079–1142
- Peter Lombardský 109?–1164
- Tomáš Akvinský 1225–1274
- John Duns Scotus 1265–1308
- William of Ockham 1280–1349

Pierre Abelard

1079–1142

1112: Sic et non

There are many seeming contradictions and even obscurities in the innumerable writings of the church fathers. **Our respect for their authority should not stand in the way of an effort on our part to come at the truth.**

In view of these considerations, I have ventured to bring together various dicta of the holy fathers, as they came to mind, and to formulate certain questions which were suggested by the seeming contradictions in the statements. These questions ought to serve to excite tender readers to a zealous inquiry into truth and so sharpen their wits. The master key of knowledge is, indeed, a persistent and frequent questioning. Aristotle, the most clear-sighted of all the philosophers, was desirous above all things else to arouse this questioning spirit, for in his Categories he exhorts a student as follows: **"It may well be difficult to reach a positive conclusion in these matters unless they be frequently discussed. It is by no means fruitless to be doubtful on particular points. " By doubting we come to examine, and by examining we reach the truth.**

Ako v stredoveku dovolili Stvoriteľovi slobodne tvoriť

- Pierre Abelard 1079–1142
- Peter Lombardský 109?–1164
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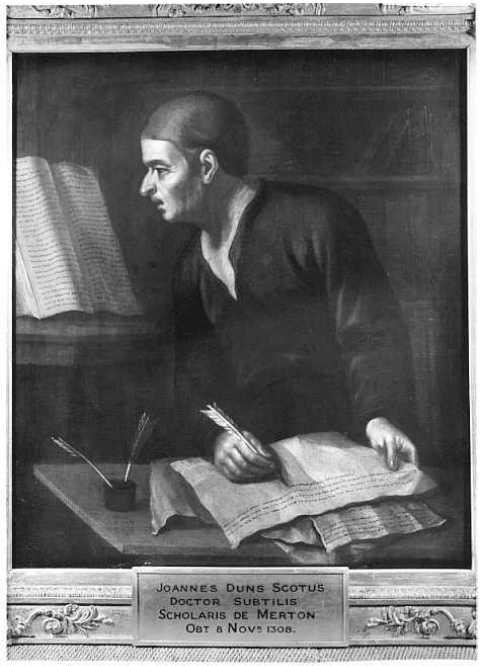
John Duns Scotus

1265–1308



DOCTOR SUBTILIS

- nar 1265
- 1290 františkán v Oxforde (?)
- 1304 do Paríža na doktorát
- 1307 profesor v Kolíne
- 1308 zomiera v Kolíne
- 1993 blahoslavený pápežom Jánom Pavlom II

Rozum ↔ Vôľa

Tomáš Akvinský: vôľa koná to, čo jej rozum predostrie ako najvyššie dobro

Duns Scotus: Rozum ukazuje vôli, čo je možné, vôľa si môže vybrať

Voluntas est super intellectu

Sloboda Stvoriteľa: Veci sú také, aké sú, nie preto, že to rozum vyžaduje, ale preto, že ich takými učinila slobodná Božia vôľa.

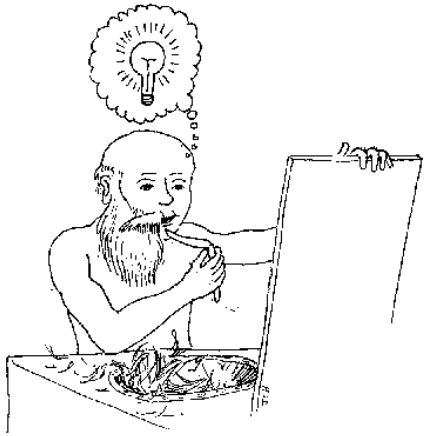
Wiliam of Ockham

1285–1349

PRVÝ PROTESTANT

- nar medzi 1280 a 1290
- asi 10-ročný k františkán London Greyfriars
- 1310 do Paríža alebo do Oxfordu štúdium teológie
- 1324 predvolaný do Avignonu, obvinený z herézy
- 1328 útek z Avignonu k Ľudovítovi Bavorskému s Michalom z Ceseny
- 1346 zvolený Karel IV
- 1349 vracia pečať rádu, pardonovaný Klementom VI. (?)
- 1349 zomiera na mor (?), v Mníchove

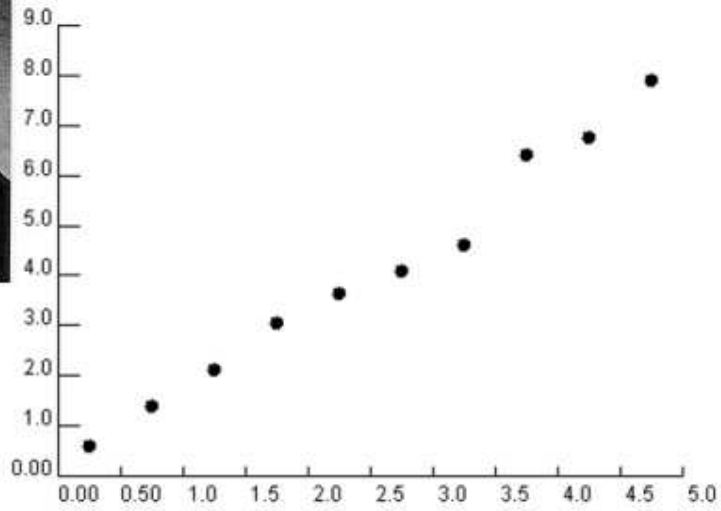
Ockhamova britva



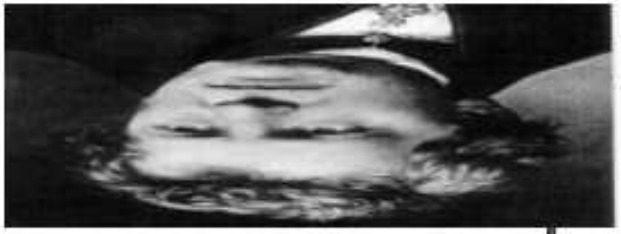
Entia non sunt multiplicanda sine necessitate.

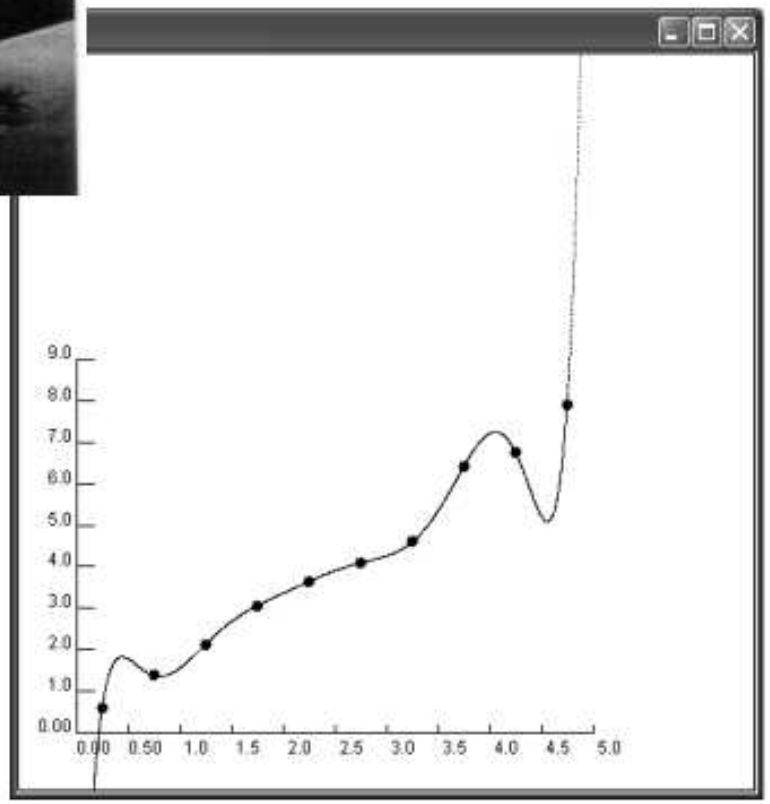
Pluralitas non est ponenda sine necessitate.

Ohmov zákon ?

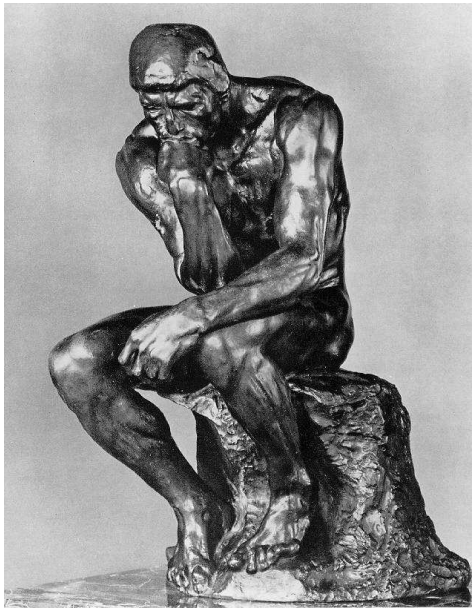
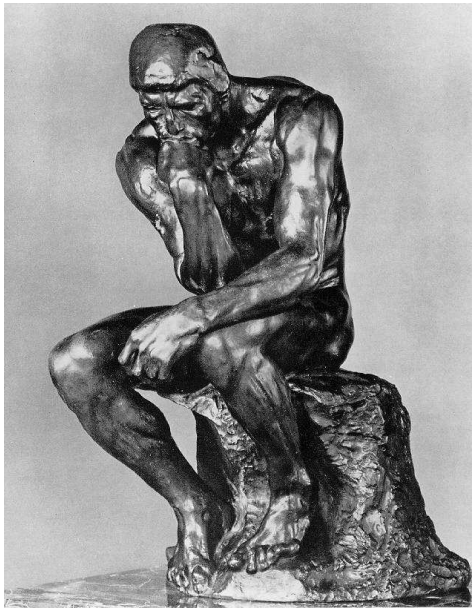


Ohmov zákon ????





Čo je fyzikálna teória?



Vím já?