

## Short Relational Theory of Everything

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**Abstract:** To make things easier to the reader, this article has been shorted to the maximum, while physical quantities are presented in dimensionless relations. Two physical constants have been used, the importance of the mathematical constant  $\exp(2\pi)$  has been assumed, as well as the relation of the proton in relation to it. The uncertainty of results is within the accuracy range of values of two applied physical quantities and can be checked in any system of measurement.

Known mathematical constants	
$2\pi=$	6.28318530717959
$t=\log(2\pi,2)=$	2.65149612947232
We calculate Cycle $\rightarrow cy=e^{2\pi}=$	<b>535.491655524765</b>

Known physical constants: Inverse fine-structure constant -  $\acute{\alpha}$  and  
Ratio of classical electron radius / proton Compton wavelength -  $\beta$

$\acute{\alpha}=$	137.035999074
$\beta=r_e/\lambda_p=$	2.132525585
We calculate $\theta=2\pi\beta=$	13.3990534244

We get the proton-to-electron mass ratio -  $\mu$  and **proton shift** -  $\Delta p$

$\mu=\theta\acute{\alpha}=$	1836.15267266
$\Delta p=1+(\theta+1)/(\theta+2)=$	<b>1.935060944</b>

We get ratios between physical values

constant1/constant2		Exponent on <b>2</b>	Result
$m_{pl}/m_p=$	<b>2<sup>^</sup></b>	$(cy/8-3\Delta p/4-3t/4)=$	1.301256467E+19
$m_p/m_q=$		$(cy/4+\Delta p/2+3t/2)=$	6.141694096E+41
$M_u/m_{pl}=$		$(3cy/4-\Delta p/2+3t/2)=$	6.387077184E+121
$\gamma=m_{ne}/m_p=$		$(3cy/2-\Delta p+3t)/(2+2\acute{\alpha}^2\log_2\mu)=$	1.0013784192043
$\alpha_G=(m_{el}/m_{pl})^2=(\mu/2\pi)^{-2}*$		$(3\Delta p/2-cy/4-t/2)=$	1.751687457E-45
$F_C/F_{Npe}=\beta*$		$(-3\Delta p/2+cy/4-t/2)=$	2.2688193641E+39
$T_{pl}/T_{BG}=\sqrt{(cy/4-\Delta p/6+t/2)*}$		$(3cy/16-\Delta p/8+5t/16)=$	5.198022E+31

**Legend:** m-mass, p-proton, pl-planck, el - electron, ne - neutron

$M_u$  - mass of universe,  $m_q$  - hypothetical mass quantum

$\alpha_G$ -Gravitational coupling constant,  $T_{pl}$ -Planck temperature,  $T_{BG}$ -Temperature of CMB radiation

$F_C$  - Coulomb force,  $F_{Npe}$  - Newton gravitational force for proton/electron pair

Most of the results you can check with CODATA values in [1], the theory is in [2], [3] and [4].

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[1] CODATA internationally recommended values of the Fundamental Physical Constants, (2010)

values of the constants <http://physics.nist.gov/cuu/Constants/>

[2] Relational theory, [http://en.wikipedia.org/wiki/Relationism\\_%28physics%29](http://en.wikipedia.org/wiki/Relationism_%28physics%29)

[3] Zivlak B., Bit, Cycle, Dimensionless, It, <http://vixra.org/abs/1311.0008>, (November 2013)

[4] Zivlak B., Mathematical Connection Among the Structures of Universe, (February 2015)

[http://fqxi.org/data/essay-contest-files/Zivlak\\_MathStructure.pdf](http://fqxi.org/data/essay-contest-files/Zivlak_MathStructure.pdf)