Neutron, Proton and Electron Mass Formula

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Abstract. This is an improved and simplified version of [1]. This version of the formula clearly shows the importance of information in physics, through the logarithm of the base 2 and form of formula, **y=2^x**.

Mathematical constants are: **e=2.71828…**, **2π=6.283185…** and two physical constants: Proton/electron mass ratio **μ=1836.152 672 45 (75)** and inverse fine structure constant **ά=137.035 999 074 (44)** [2]. The following relation is valid:

$$\gamma = \sqrt{2^{\left[e^{2\pi} + \frac{-1}{1+1/(\mu/\alpha'+1)} + 3\log(2\pi,2)-1\right]\Big/\left[1+\alpha'^2\log(\mu,2)\right]}} = 1.00137841920390(92)$$

That is neutron/proton mass ratio: γ =**1.001 378 419 17 (45)**   [2]

From personal experience I can say that few people are interested in reading the explanation for this formula. The perspective of the majority can be summed up by the statement of a reputable professor: "The formula is a coincidence, maybe even a curiosity." In the past ten months I have published dozens of these "curiosities", with more than ten significant digits correct, thanks to viXra.org. An attentive reader can notice Planck's values and nucleus in the exponent [3].

I would like to thank the minority who understood the fundamental importance of the formula and contacted me. I would especially like to express my gratefulness to Mr. Hugh Matlock for determining the uncertainty in this version of the formula.

References:

1. Branko Zivlak - *Neutron, proton and electron mass ratios,* http://viXra.org/abs/1211.0090
2. http://physics.nist.gov/cuu/Constants/ , [update: November 2012].
3. Branko Zivlak - *Calculate Universe 3 – Planck Units,* http://viXra.org/abs/1305.0145