Direct Correlation Between Fundamental Physical Constants (Specifically, Stable Particle g-factor) and Repeating Decimals of 7, 23 and 431

CODATA recommended *g*-factor values:

Particle	Symbol	*g*-factor	Relative standard uncertainty
proton	g_p	+5.585694 6893(16)	2.9×10^{-10}
electron	g_e	−2.00231930436092(36)	1.8×10^{-13}
neutron	g_n	−3.82608552(90)	2.4×10^{-7}

(Source: https://physics.nist.gov/cgi-bin/cuu/Results?search_for=g+factor; https://en.wikipedia.org/wiki/G-factor_(physics))

Repeating Decimals of certain *b*=2 (*i.e.*, binary (*i.e.*, particle/anti-particle)) Prime Numbers:

7: (6-digit, beginning with 6÷7): 8, 5, 7, 1, 4, 2.

23: (22-digit, beginning with 19÷23): 8, 2, 6, 0, 8, 6, 9, 5, 6, 5, 2, 1, 7, 3, 9, 1, 3, 0, 4, 3, 4, 7.

431: (2x215-digit, beginning with prime reciprocal, 1÷431): 0, 0, 2, 3, 2, 0, 1, 8, 5, 6, 1, 4, 8, 4, 9, 1, 8, 7, 9, 3, 5, 0, 3, 4, 8, 0, 2, 7, 8, 4, 2, 2, 2, 7, 3, 7, 8, 1, 9, 0, 2, 5, 5, 2, 2, 0, 4, 1, 7, 6, 3, 3, 4, 1, 0, 6, 7, 2, 8, 5, 3, 8, 2, 8, 3, 0, 6, 2, 6, 4, 5, 0, 1, 1, 6, 0, 0, 9, 2, 8, 0, 7, 4, 2, 4, 5, 9, 3, 9, 6, 7, 5, 1, 7, 4, 0, 1, 3, 9, 2, 1, 1, 1, 3, 6, 8, 9, 0, 9, 5, 1, 2, 7, 6, 1, 0, 2, 0, 8, 8, 1, 6, 7, 0, 5, 3, 3, 6, 4, 2, 6, 9, 1, 4, 1, 5, 3, 1, 3, 2, 2, 5, 0, 5, 8, 0, 0, 4, 6, 4, 0, 3, 7, 1, 2, 2, 9, 6, 9, 8, 3, 7, 5, 8, 7, 0, 0, 6, 9, 6, 0, 5, 5, 6, 8, 4, 4, 5, 4, 7, 5, 6, 3, 8, 0, 5, 1, 0, 4, 4, 0, 8, 3, 5, 2, 6, 6, 8, 2, 1, 3, 4, 5, 7, 0, 7, 6, 5, 6, 6, 1, 2, 5, 2, 9.

9, 9, 7, 6, 7, 9, 8, 1, 4, 3, 8, 5, 1, 5, 0, 9, 1, 2, 0, 6, 4, 9, 6, 5, 1, 9, 7, 2, 1, 5, 7, 7, 7, 2, 6, 2, 1, 8, 0, 9, 7, 4, 4, 7, 7, 0, 5, 8, 2, 3, 6, 6, 5, 8, 9, 3, 2, 7, 1, 4, 6, 1, 7, 1, 6, 9, 3, 7, 3, 5, 4, 9, 8, 8, 3, 0, 9, 0, 7, 1, 9, 2, 5, 7, 5, 4, 0, 6, 0, 3, 2, 4, 8, 2, 5, 9, 8, 6, 0, 7, 8, 8, 8, 6, 3, 1, 0, 9, 0, 4, 8, 7, 2, 3, 8, 9, 7, 9, 1, 1, 8, 3, 2, 9, 4, 6, 6, 3, 5, 7, 3, 0, 8, 5, 8, 4, 6, 8, 6, 7, 7, 4, 9, 4, 1, 9, 9, 5, 3, 5, 9, 6, 2, 8, 7, 7, 0, 3, 0, 1, 6, 2, 4, 1, 2, 9, 9, 3, 0, 3, 9, 4, 4, 3, 1, 5, 5, 4, 5, 2, 4, 3, 6, 1, 9, 4, 8, 9, 5, 5, 9, 1, 6, 4, 7, 3, 3, 1, 7, 8, 6, 5, 4, 2, 9, 2, 3, 4, 3, 3, 8, 7, 4, 7, 0.

(Source: Microsoft Excel; www.thisisarealthing.com)

Note the consistent delta of 0.000001 between neutron and electron main values and corresponding repeating decimals for 23 and 431 and the similarly consistent, albeit elevated, delta of 0.00002 for the proton and the repeating decimal for 7.

Reference(s):

ELECTRONIC JOURNAL OF COMBINATORIAL NUMBER THEORY 7, (2007), "Generalizations of Midy's Theorem on Repeating Decimals" - Harold W. Martin, Department of Mathematics and Computer Science, Northern Michigan University, published January 25, 2007.

https://en.wikipedia.org/wiki/Modular_arithmetic; https://en.wikipedia.org/wiki/Midy%27s_theorem.