

Math News

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Return Trip on the N Railroad

For n existing stations, $n(n-1)$ tickets were sold. After k stations were added, the 46 additional sets of tickets amounted to $(n+k)(n+k-1) - n(n-1)$. So, $46 = k(2n+k-1)$. Therefore, k is a positive integer factor of 46 (since it represents the number of train stations), and $n = \frac{1}{2} \left(\frac{46}{k} - k + 1 \right)$. We have only 4 cases to check: k is 1, 2, 23, or 46. And we find that neither 23 nor 46, but both 1 and 2, yield $n > 0$. Since we know that "some new stations were added," we may conclude that 2 new stations were added to the 11 that existed before.

An Old Favorite

Find a 10-digit number where the first digit is how many zeros in the number, the second digit is how many 1s in the number etc. until the tenth digit which is how many 9s in the number.

The Kilogram's Makeover

By: *Knvul Sheikh*, 9/1/2016

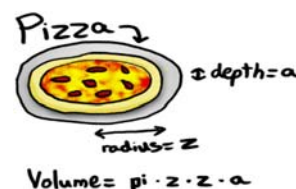
The Kilogram is the last remaining standard of measurement in the International System of Units that is still based on a physical object—a single, golf ball-sized cylinder of platinum and iridium that sits in a vault just outside Paris. It is secured underneath three vacuum-sealed, glass bell jars—in a temperature-controlled room in the International Bureau of Weights and Measures. The slightest amount of dust, moisture, oil from fingerprints, or contraction or expansion could alter the mass of the cylinder.

That is why scientists, for decades now, have wanted to redefine the kilogram in terms of constants found in nature—an achievement that would provide a more stable (and accessible) unit of measurement. Scientists recently reported that they have paved the way for such a feat by using Planck's constant, a mathematical value that describes the link between the energy of a photon and its frequency and that can be related to mass through Einstein's famous equation $E=mc^2$.

At the 2018 General Conference on Weights and Measures, measurement data obtained from multiple teams will be evaluated, including a constant calculated by counting the atoms in a silicon sphere. A complex computer program will subsequently sift through the numbers to arrive at a final value. If you would like more information, visit <http://www.scientificamerican.com/article/the-kilogram-s-makeover-is-almost-complete/>.

KME Corner

The first meeting of Kappa Mu Epsilon will be Thursday, Feb 23rd at 6:30 in CCIT 245. Fundraisers and the induction ceremony will be discussed. The induction ceremony will Sunday, Feb 26th at 2:00 in CCIT 156.



Monday Night Activity Schedule

Board Games 2/27
Dead Poets' Society (DPS) 3/6
Rockband Night 3/13
DPS 3/27
Board Games 4/3
DPS 4/10
Rockband Night 4/17
DPS 4/24

"Mathematics for Human Flourishing"

All are hereby enthusiastically encouraged to view Francis Su's recent MAA President Retiring Address. See <https://www.youtube.com/watch?v=xEtDvc1SWm8>.

Seminar Scheduled

Dr. Rachel Grotheer, from Goucher College, will be coming to FSU to give a seminar sponsored by the Mathematics Department on April 6th. Keep an eye out for flyers with more information!

Fall 2017 Courses

236.001	MTRF	11:00-11:50	CCIT 221	Rob Forsythe
236.002	MTRF	11:00-11:50	CCIT 264	Justin Dunmyre
236.003	MTRF	2:00-2:50	CCIT 264	Justin Dunmyre
237.001	MTRF	11:00-11:50	CCIT 223	Sarah Dumnich
237.002	MTRF	2:00-2:50	CCIT 223	Sarah Dumnich
238.001	MTRF	2:00-2:50	CCIT 221	Frank Barnet
315.001	TR	12:30-1:45	CCIT 221	Rob Forsythe
350.001	TR	12:30-1:45	CCIT 264	Justin Dunmyre
432.001	MWF	12:00-12:50	CCIT 264	Justin Dunmyre
452.001	TR	9:30-10:45	CCIT 223	TBA
461.001	MW	3:00-4:15	CCIT 223	Mark Hughes
491.001	TR	3:30-4:45	CCIT 245	Mark Hughes
680.001	MWF	11:00-11:50	CCIT 225	Lance Revennaugh