Math News

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Estimathon Answers (from September)

We hope your intervals of estimation were narrow and contained the answers reported below.

- The number of grams of sodium you'd be consuming if you had "one of everything" on the Taco Bell menu.
  158
- The great-circle distance between the two most populous cities in Africa.
  2442
- The number of positive multiples of 11 with distinct digits.
  891517

Students Travel to Conference

On September 21st, five students (Ashley Armbruster, Bailey Brewer, Andrew Kastner, Jordan Thomas, and Chris Walsh) travelled with Dr. Dunmyre to James Madison University to attend the Shenandoah Undergraduate Mathematics and Statistics Conference. Among the myriad talks given by undergraduates, there were keynote presentations on using mathematics to fight partisan gerrymandering and on surprising connections between various impossible compass-straightedge constructions.

Phi Kappa Phi

Four mathematics students (Benjamin Forrest, Christine Gilbert, Tyler Gilks, and Chad Shumaker) were recently inducted into FSU's chapter of Phi Kappa Phi. PKP is an honor society formed to "recognize and promote academic excellence in all fields of higher education and to engage the community of scholars in service to others." Since its founding in 1897, more than 1.5 million members have been initiated.

Is Mathematics Invented or Discovered?

by Ashley Armbruster

The Philosophical Society convened on Tuesday, November 19 to discuss the question, "Is mathematics invented or discovered?" A plethora of questions were asked as many people expressed their views with different definitions of "mathematics", "discovered", "nature", and a few other terms. Examples used to support arguments consisted of orbits of objects in space and the Golden Ratio. After an hour of discussion, a majority of the group came to a consensus: mathematics is discovered, but humans invented the labels and terms used to define the discoveries.

KME Corner

Our local chapter of KME will meet once more this term, beginning at 6:00 pm on Tuesday, December 3rd in CCIT 223.

New "Dog Years" Formula Proposed

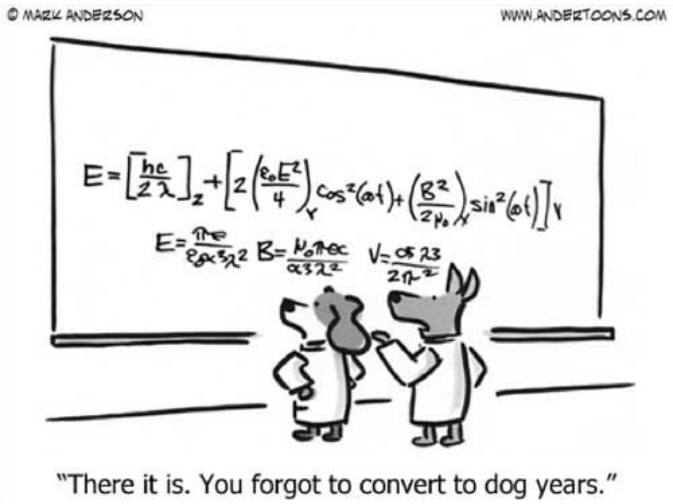
A recently-published paper, "Quantitative Translation of Dog-to-Human Aging by Conserved Remodeling of Epigenetic Networks", suggests that the well-known formula for converting the "human equivalent" of a dog's age should be replaced by a slightly more complicated, but perhaps more accurate, conversion.

We've grown up hearing that a dog's age should be multiplied by 7 to roughly estimate where it is in its lifespan (on a human lifespan scale). So, a 5-year-old dog might be thought to have the approximate health, development, and social traits as a 35-year-old human. New research indicates that such a linear conversion underestimates a dog's rate of early development and overestimates it later. The researchers at Cold Spring Harbor Laboratory propose using the formula

$$h = 31 + 16 \ln(d),$$

where d is the dog's actual age (in years) and h is the approximate human analog age (also in years).

Clearly there's a problem with this model until it becomes positive (at about 7.5 weeks) and even after that during the remainder of puppyhood. (Is a 2-year-old dog middle-aged?) But the logarithmic transformation flattens the curve substantially after that and may indeed provide more useful information regarding our trusted and faithful canine companions.



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