

Goodσελλ Gazette

Numerology

Everyone can agree that $1 + 1 = 2$. But the idea that 7 is greater than 13 – that some numbers are luckier than others – makes no sense to some people, while others will go so far as to avoid real estate options on the 13th floor. Such numerical biases can cause deep divisions. Last month in Hong Kong, property developer Henderson Land Development Co. made news for selling a condominium for \$56.6 million, a price the developer called a residential record in Asia. But after that sale was announced, the property began making news for other unusual numbers. Henderson is labeling the floors of its

property at 39 Conduit Road with numbers that increase, but not in the conventional 1-then-2 way. The floor above 39, for example, is 60. And the top three floors are consecutively labeled 66, 68 and 88. Henderson’s use of numerology, the belief that certain digits have greater meaning beyond merely their quantity, has offended some people’s sense of order, yet made the property more appealing to others. Read more about numerology and the Henderson property at <http://online.wsj.com/article/SB125668948820711987.html>. The table below is from *The Wall Street Journal*’s October 28th article by Carl Bialik.

Numerology | How some numbers came to be viewed as lucky or unlucky

NUMBER	CONNOTATION	CULTURE	ORIGIN	EXAMPLE
4	Negative	Chinese	Word for number 4 sounds like word for death.	Floor-numbering systems in some prominent buildings skip 40-49.
13	Negative	Various	Various reasons have been suggested, including the number of diners at Last Supper.	Many buildings around the world don’t label any floor ‘13.’
17	Negative	Italian	17 is XVII in Roman numerals; VIXI, meaning ‘I lived’ in Latin, is common on gravestones.	Many hotels, including Hotel Casci in Florence, don’t have a room numbered 17.
18	Positive	Jewish	The Hebrew letters spelling ‘chai,’ or living, are 8th and 10th in the alphabet, adding up to 18.	Monetary gifts for Jewish celebrations often are given in multiples of 18.
666	Negative	Christian	The Book of Revelations identifies 666 as the number of the beast.	Reeves, La., ditched 666 as the prefix of its landline telephone numbers in 2008.

US Census Bureau Job Opportunities

The US Census Bureau has several opportunities for short or long-term employment in the Washington, DC area. Candidates are required to have completed 24 semester hours of mathematics and statistics (of which 15 hours must be advanced math and 6 hours must be in calculus-based statistics) and all applicants must have US citizenship. For more information visit www.census.gov

College of Charleston Masters Program

The College of Charleston mathematics department is seeking candidates for their Master of Science program in Mathematics. If you have taken three semesters of calculus, linear algebra, differential equations, and at least one semester each of abstract algebra and real analysis, and maintained a GPA of 3.0 or above, you are encouraged to apply online. For an in-state student tuition rate, Graduate Scholar's awards are available for out-of-state students with an average of B or above.

The Shape of Space

When we look out on a clear night the universe seems infinite. Yet this infinity might be an illusion. During the first half of Jeff Weeks' presentation, computer games will introduce the concept of a "multiconnected universe." Interactive three-dimensional graphics will then take the viewer on a tour of several possible shapes for space. Finally, you'll see how recent satellite data provide tantalizing clues to the true shape of our universe. Jeff Weeks will be giving his presentation on The Shape of Space at 4:30 on Wednesday November 11 at John B. Davis Lecture Hall, Macalester College.

Catalan Numbers

Friday, November 13th, Kendra Killpatrick of Peppertine University will be giving a talk titled "Fun and Games with the Second Most

Famous Mathematical Sequence" at 5 p.m. at Augsburg College. All are welcome to attend.

Faculty and Staff Kiddy Photo Contest

Reminder: The Math Dept Toddler Photo Contest ends on Monday, the 9th at 5pm. Check out the photos by the whiteboard or on the web at <http://people.carleton.edu/~lchihara/> and submit your entry now! We will announce the winners in next week's *Gazette* so don't miss your chance for fame and glory (and prizes)!

PROBLEMS OF THE WEEK

1. If a, b, c are real numbers such that $a^2 + b^2 + c^2 = 1$, show that

$$-\frac{1}{2} \leq ab + bc + ca \leq 1.$$

2. Choose two points at random in the interval $[0,1]$. These two points cut the interval into three segments. What is the probability that these three segments can form the sides of a triangle? Note: "at random" means the two points are chosen independently and with the uniform probability distribution. The probability of choosing a point in the interval $[a, b]$ is $b - a$.

Henry Luo and Li Shunji each solved both of last week's problems. The lottery winner this week is Li Shunji. He should stop by CMC 217 to collect a prize from the B.B.O.P. As always, to earn a chance to visit the B.B.O.P. you must submit a correct solution to one or both of the above problems by Tuesday night.

Gail Nelson

Editors:	Deanna Haunsperger Kristy Spiak
Problems of the Week:	Gail Nelson
Subscriptions & Web:	Sue Jandro