

# math news

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## The Great Math Mystery

All are invited to view *The Great Math Mystery*, a NOVA film, on Monday, November 6, at 6:30, in CCIT 186. Follow mathematics from Pythagoras to Einstein and beyond. It all leads to the ultimate riddle: Is mathematics a human invention or the discovery of the language of the universe? Sponsored by The Department of Mathematics and The Philosophical Society, the event will include a discussion after the film.

## Check Out the Majors Fair

Check out FSU's Majors Fair on Wednesday, November 15, from 11 am until 2 pm in the Lance Center ARMAH. The fair will feature fun and interactive displays designed to attract future majors.

## Food For Thought Solution

Two people arrive in a restaurant independently. Each arrives at a random time between 5pm and 6pm, distributed uniformly (no moment in this range is any more likely for arrival than another). What is the probability they arrived within 10 minutes of each other?

Solution: Draw a 6 by 6 square. Plot the arrival time of one person vertically. Plot the arrival time of the other person horizontally. The times they arrive within 10 minutes of each other can be represented by a diagonal stripe across the square. The area of the entire square is 36. The area of the portions outside the stripe is 25. Thus the area of the stripe is 11. Considering the uniformity of the arrival times the probability of arriving within ten minutes is the area of the stripe divided by the area of the square =  $11/36$ .

## Let Your Light Shine.....Or Not

There are 100 light bulbs lined up in a row in a long room. Each bulb has its own switch and is currently switched off. The room has an entry door and an exit door. There are 100 people lined up outside the entry door. Each bulb is numbered consecutively from 1 to 100. So is each person.

Person No. 1 enters the room, switches on every bulb, and exits. Person No. 2 enters and flips the switch on every second bulb (turning off bulbs 2, 4, 6...). Person No. 3 enters and flips the switch on every third bulb (changing the state on bulbs 3, 6, 9...). This continues until all 100 people have passed through the room.

What is the final state of bulb No. 64? And how many of the light bulbs are illuminated after the 100th person has passed through the room?

## KME Corner

Kappa Mu Epsilon, our mathematics honor society, will have its next meeting on Wednesday, November 8<sup>th</sup> at 5:00 in CCIT 245. A fundraising project will be discussed and a fundraising project (pizza) will be eaten.

## Upcoming MATH Activities

Nov 03, 4-5	Board Games
Nov 10, 3-4	Logic Puzzles
Nov 17, 3-4	Board Games and Rock Band
Dec 01, 4-5	Logic Puzzles
Dec 08, 3-4	Board Games

## Seminar Presented

Dr. Brendon LaBuz (FSU alumnus, currently professor at St. Francis University) visited on November 1<sup>st</sup>, presenting a lecture on Axioms for Geometry, focusing on the concept of betweenness. Watch for notice of future such events.

## Spring Course Offerings

See your advisor to register for the Spring 2018 semester. Here are the offerings at and above the Calculus level.

236.001 MTRF	11:00-11:50	Dunmyre
236.002 MTRF	2:00- 2:50	Dunmyre
237.001 MTRF	11:00-11:50	Forsythe
237.002 MTRF	2:00- 2:50	Hughes
238.001 MTRF	2:00- 2:50	Barnet
*340.001 T	6:00- 8:30	Michael
380.001 M W F	10:00-10:50	Dumnich
380.002 M W F	12:00-12:50	Dumnich
425.001 T R	11:00-12:15	Dumnich
432.001 M W F	1:00- 1:50	Dunmyre
436.001 T R	11:00-12:15	Latta
437.001 M W	3:00- 4:15	Lemmert
480.001 T R	12:30- 1:45	Hegde

\*MATH 340 does not carry MATH major credit.

## Quotable Quote

"In the broad light of day mathematicians check their equations and their proofs, leaving no stone unturned in their search for rigour. But, at night, under the full moon, they dream, they float among the stars and wonder at the miracle of the heavens. They are inspired. Without dreams there is no art, no mathematics, no life."

Michael Atiyah (*Notices of the AMS*, 2010)