

Math News

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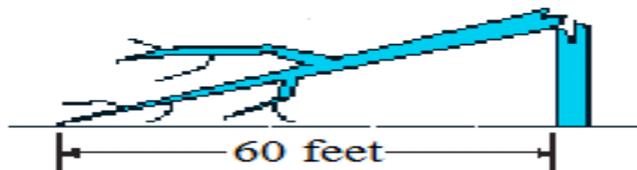
Registration Continues

Here are the MATH courses (236 and above) that are offered for the Fall 2013 semester. See your advisor to register by Friday, April 19.

MATH 236 (Calculus I), MTRF, 8 - 8:50, Dr. Revenaugh
MATH 236 (Calculus I), MTRF, 11 - 11:50, Dr. Hughes
MATH 236 (Calculus I), MTRF, 2 - 2:50, Dr. Hughes
MATH 237 (Calculus II), MTRF, 11 - 11:50, Dr. Forsythe
MATH 237 (Calculus II), MTRF, 2 - 2:50, Dr. Hegde
MATH 238 (Calculus III), MTRF, 8 - 8:50, Dr. Dunmyre
MATH 238 (Calculus III), MTRF, 11 - 11:50, Dr. Barnett
MATH 350 (Linear Algebra I), MWF, 1 - 1:50, Dr. Forsythe
MATH 432 (Diff. Equations), MWF, 12 - 12:50, Dr. Barnett
MATH 435 (Numerical Analysis), TR, 11 - 12:15, Dr. Hegde
MATH 440 (Mod. Coll. Geo.), TR, 12:30 - 1:45, Dr. Michael
MATH 461 (Hist. of Math.), MWF, 10 - 10:50, Dr. Hughes
MATH 491 (Seminar In Math.), TR, 3:30 - 4:45, Dr. Hughes

Storm Damage Assessment

Lightning hit a tree one-fourth of the distance up the trunk from the ground and broke the tree so that its top landed 60 feet from its base, as shown. A) How tall was the tree originally? B) Assuming the tree trunk is conical, what percent of the trunk's volume fell?



- A) Using the Pythagorean Theorem with horizontal leg 60, vertical leg x , and hypotenuse $3x$, we find x and then calculate $4x$ to be approximately 67 feet.
- B) Using the formula $(V = (1/3)(\pi)(r^2)h)$ for the volume of a cone on the fallen part and also on the entire (pre-lightening) tree, and either using the numbers found in part A or just using the 3:1 ratio, we conclude that about 42% of the tree trunk's volume has fallen (and about 58% is still standing).

New Name

You may have noticed a new name in the instructor list above, that of Dr. Justin Dunmyre, who will join us in the Fall, coming from his current post-doc appointment at the University of Michigan. His specialty is in Applied Mathematics, particularly medical applications. Look for an enhanced story of welcome in the Fall.

KME Corner

Kappa Mu Epsilon will meet on Thursday, April 25th at 5:30 PM in Dunkle 202. President Kevin Loftus will be giving a talk on Group Theory and Rubik's Cube. Also, there will be elections for next year's officers. Plans also include a picnic at Glendenning Park on Reading Day.

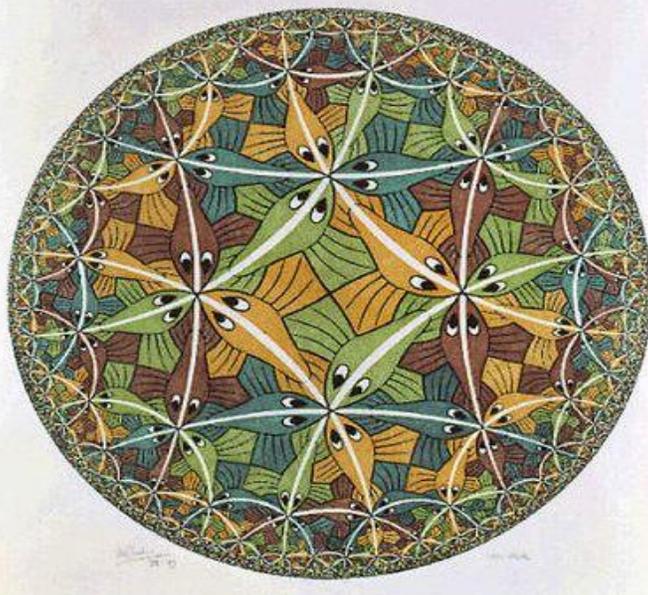
Probably a Probability Problem

Suppose that one day's weather can be used to predict the next day's weather, according to the conditional probabilities given in the table. Find the likelihood that Sunday is dry given that Friday is dry.

		Tomorrow	
		DRY	WET
To-	DRY	.6	.4
day	WET	.2	.8

Unlimited Art

M. C. Escher's Circle Limit III illustrates the concept of hyperbolic space. Although the fish appear to get smaller



toward the edge of the image, in the non-Euclidean world of hyperbolic geometry, the white lines along all the fish spines are actually the same length. Each fish is the same size as all the others. An inhabitant of this world would have to walk an infinite distance to reach the circle's edge.