Math News

Return of the Jellybeans

Let $n = g + r$ = the total number of jelly beans.

Probability of gg: $\left(\frac{g}{n}\right)\left(\frac{g-1}{n-1}\right) = \frac{g^2-g}{n(n-1)}$

Probability of gr: $\left(\frac{g}{n}\right)\left(\frac{r}{n-1}\right) + \left(\frac{r}{n}\right)\left(\frac{g}{n-1}\right) = \frac{2rg}{n(n-1)}$

Probability of rr: $\left(\frac{r}{n}\right)\left(\frac{r-1}{n-1}\right) = \frac{r^2-r}{n(n-1)}$

1) Probability Alice wins: $\frac{g^2-g}{n(n-1)} + \frac{r^2-r}{n(n-1)}$

   Probability Bob wins: $\frac{2rg}{n(n-1)}$

   For a fair game: $\frac{g^2-g}{n(n-1)} + \frac{r^2-r}{n(n-1)} = \frac{2rg}{n(n-1)}$

   ➔ $g^2 - g + r^2 - r = 2rg$

   ➔ $(g-r)^2 = g + r$

2) If Alice is more likely to win, then

   $g^2 - g + r^2 - r > 2rg$

   ➔ $(g-r)^2 > n$

   ➔ $|g-r| > \sqrt{n}$

Your Ticket to Fun

Every station on the N railroad sells tickets to every other station. When the railroad added some new stations, 46 additional sets of tickets had to be printed. How many is "some"? How many stations were there before?

Spring Course Offerings

Math 236.001-MTRF 11:00-11:50 - CCIT 223 - Forsythe
Math 236.002-MTRF 2:00-2:50 - CCIT 223 - Forsythe
Math 237.001-MTRF 11:00-11:50 - CCIT 264 - Hughes
Math 237.002-MTRF 2:00-2:50 - CCIT 221 - Hughes
Math 238.001-MTRF 11:00-11:50 - CCIT 221 - Barnet
Math 340.101-T 6:00-8:30pm - CCIT 245 - Michael
Math 380.001-MWF 12:00-12:50 - CCIT 221/235 - Dumnich
Math 380.002-MWF 1:00-1:50 - CCIT 223/235 - Dumnich
Math 426.001-MWF 1:00-1:50 - CCIT 245 - Forsythe
Math 432.001-TR 2:00-3:15 - CCIT 264 - Dunmyre
Math 436.001-TR 12:30-1:45 - CCIT 221 - Barnet
Math 440.001-TR 9:30-10:45 - CCIT 264 - Hughes
Math 465.001-MWF 10:00-10:50 - CCIT 264 - Hughes
Math 470.001-TR 3:30-4:45 - CCIT 221 - Dunmyre

KME Corner

The next KME meeting will be held on Thursday, December 1 from 5:00 to 6:00 in CCIT 245.

College Algebra Specialist

Ms. Deborah Devlin joined the Math Department at Frostburg State University as a lecturer in spring of 2016 after serving as an adjunct math instructor for several semesters both at FSU and Allegany College of Maryland. She also teaches writing and math test prep for the Upward Bound program at the University. She discovered an irresistible interest for mathematics while pursuing a computer science degree, initially vowing to learn enough math to be able to read Hofstadter's *Gödel, Escher, Bach*. But, as she notes, "there is never enough math, and always more of interest around the corner." Her current interests include the math of the ancient Greeks, geometers throughout history, and topology. Ms. Devlin's academic background includes post-secondary degrees in computer science, English, and mathematics as well as a Master's degree in mathematics education from Frostburg State University. She has worked as a travel agent, insurance agent, and freelance graphic designer before making a decision to attend college where she discovered, happily, that she is actually a teacher. Her educational philosophy includes a heavy dose of encouragement for her students to set lofty goals, and to grow in spirit, character, and confidence while reaching for those goals. She loves travelling with her husband Bill, writing, theology, and pizza. Especially pizza.

Student Presents Personal Research

Jacob Williams presented his research "Compartment Syndrome: Dynamical Systems Model and Analysis" at the 12th Annual Shenandoah Undergraduate Mathematics and Statistics (SUMS) Conference at James Madison University in September. Jacob, himself, actually suffers from compartment syndrome.

The research project began as a final project in Dr. Dunmyre's MATH 470 class last spring. Jacob improved the model over the summer.

An interesting side note: Jacob's sister Jocelyn Williams recently graduated from FSU and was awarded program honors by the Department of Mathematics.

Monday Evening Activities Continue

MATH activities continue on Monday evenings starting at 5:00 in CCIT 245. Join other MATH folks for the Dead Poet Society meetings, Rock Band Nights, and Board Game Nights. Contact a professor or fellow student for more information.

Math News is published for students, faculty, staff, and administrators by the Department of Mathematics.