

**How to convince other people that this answer is wrong?** A couple plan to have three children. What is the chance they will have just one boy? An easy answer is, one-third ( $1/3$ ). Of course, you know the answer is incorrect since you have learnt the binomial distributions. It may take you some effort to convince a person who has limited knowledge in mathematics that this answer is wrong. However, there is an obvious and easy way to show that the answer is wrong. How to convince a person whose knowledge in mathematics is very limited that the answer is wrong?

★ Please **Submit** your solution to

- ✓ Dr. Erol Akbas @ matexa@langate.gsu.edu **or**
- ✓ Dr. Yuanhui Xiao @ matyxx@langate.gsu.edu

before the **deadline: Friday, January 28, 2011, 5:00PM.**

★ You may get a hard copy of this problem in the box for **Problem of the Month** in the 7<sup>th</sup> floor of COE (College of Education).

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### Problem of Last Month: Distributing Books

*A teacher has three (3) different books to distribute among her twelve (12) students in an English literature class. In how many ways can she give the books to her students? Assume that a student may have more than one book.*

**Winner: Jeremy Brown.**

**Solution.** A book can be given to any one of the twelve students, so there are 12 ways to give a book. Hence, in total, there are  $12^3 = 1728$  ways to give the three books.