Vol. XXI, No. 4 Feb. 2007

A Mathsemantics Primer and Quiz

A 1994 book entitled, "*Mathsemantics: Making Numbers Make Sense*," laments the fact that mathematics is often regarded as a field full of rules, procedures, and calculations that are best blindly followed, and that language is allowed to be sloppy even when it's being used to communicate something as detail-oriented as mathematics. The book and its admirers advocate the intentional reconnecting of mathematics and semantics by encouraging educators (and others) in the fields of language and mathematics to be more mathsemantically aware.

A prime example can be presented as a somewhat famous question: Can you add apples and oranges? What would you write as the answer to "5 apples plus 4 oranges"? If you've heard, and believed, that you can only add like things, then you are likely to say that no, the above problem cannot be done and has no answer. If the deepest meaning of the operation of addition is considered, however, it should be clear that it's not only possible to add unlike things, but that we do it all the time. Consider: "3 people plus 2 people = ?" Most of us would answer "5 people." But, really, no two of those five people were "like"; they were all different. It's just that we treat them as identical since they all are "people." Hence we certainly can add 5 apples and 4 oranges if we find a (broader) category into which they all fit. Isn't "9 pieces of fruit" a correct and meaningful answer?

For more information on the book, related articles, and research projects, visit www.mathsemantics.com. Meanwhile, here's a short quiz designed to entice you into more mathsemantic thought. Answers will appear in next month's *Math News*.

1) What is really meant by "McDonald's has served over 10 billion customers"?
2) If Al has been married two times and Bob has been married three times more than Al, how many times has Bob been married? [multiple choice: 5, 6, 8]
3) Is it really a possibility that Moon M is 50 times smaller than Planet P?
4) When, if ever, is 110% really possible?

Sign in Einstein's Office

"Not everything that counts can be counted, and not everything than can be counted counts."

Do You Qualify for KME?

What is KME, and how can you become a member? KME (Kappa Mu Epsilon) is a national mathematics honorary with a chapter here at Frostburg State, and this chapter will induct new members later this semester. In order to join KME, you must have completed at least three college mathematics courses, at least one of which must have been taken at FSU at the Calculus II level or above, with a 3.0 or better average in all college mathematics courses taken, and at least a 3.0 GPA at Frostburg State. KME applications have been distributed in mathematics classes, and are due by February 14. Questions and completed applications should be directed to one of the KME advisors (Dr. Hughes, DH224 or Dr. Barnet, DH223).

Scholarship Available

The Mathematics Department sponsors a scholarship for Frostburg State students: the Mathematics Faculty Excellence Award for Mathematics Majors. Eligibility requirements for this scholarship include senior standing at the time of receipt of the award, an overall GPA of 3.0 or higher and a departmental GPA of 3.5 or higher.

Application forms are available from the Department secretary in DH 203. Completed application forms should be returned to the Department secretary by March 1.

FSU Mathematics Symposium

Mark April 20, 2007 on your calendar: this is the date of the 36th annual Frostburg State University Mathematics Symposium. More information will appear in next month's *Math News*.

Answer to Previous Puzzle

In last month's puzzle, a student decides to use a coin to randomly guess the answers to a series of True/False questions. The student suspects that the coin is biased and wants a strategy for using the coin which will guarantee purely random selections. The student should toss the coin twice for each answer, noting the results in order. Discarding Tail/Tail and Head/Head results, the student can use Tail/Head as True and Head/Tail as False. Assuming that the probability of getting a Tail is p ($0 < p < 1$), then the probability of getting a Head is 1-p. The probability of True is equal to the probability of False, i.e., p(1-p) for each.

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