Book Shelf Reviews

Humble Pi - The Role Mathematics Should Play in American Education, Michael K. Smith. (Prometheus Books, 1994)

With all the concern about the US lagging behind other countries in the math/science race and the movement for national standards with more rigorous standards, Smith suggests that what we need is not more math, but rather *less*! The problem as he sees is that the kind of math that students would be learning would not enhance their ability to be productive citizens of the 21st century. He calls for a radical change in the way mathematics is taught with more of a focus on the real skills that students need. Though you may not agree with everything he writes, his work is well worth examining. (Note: In the Foreword, Papert makes a distinction between "math" which is what is taught in schools and "mathematics" which is what ought to be taught.)

> "..*Humble Pi* is not a tirade against mathematics as such. Nor does it want to deny the usefulness (even in the age of calculators) of being able to figure that two dimes and a nickel make a quarter. What it does with wit and energy is punch holes in the reasons given for insisting that everyone should learn to do all that other stuff in the math curriculum..."
>
> *Seymour Papert, from the Foreword to Humble Pi*

Mathsemantics - Making Numbers Talk Sense, Edward MacNeil. (Viking, 1994)

How would you answer this question:

2 apples
+ 5 oranges

How do you think 196 clerical applicants who responded to a want ad asking for people who were "good at numbers" answered this question? MacNeil as part of a market research project gave this question to job applicants between 1969 and 1984. It might (or might not) surprise that there were 56 different answers given by this group. Only 52 of the applicants answered it in the expected way - some variation of 7 fruit. The problem is in what this problem *means!* The book talks about the divorce between numbers and what they mean and suggests that the key to improving mathematical literacy is to reunite them. The book is helpful in understanding why our students don't understand most of the time. Would you have the answered the above problem differently if it were written in words? For example, What's your total when you put 2 apples and 5 oranges in a bag? Is the first a math (ala Papert) problem and the other a real world problem? Are they to be done differently?

New Publications from Jansen

•**Connected Geometry Series** from Education Development Center (Paul Goldenberg and Al Cuoco). Titles in the series include: *Making the Cut*, *Similarity*, *Optimization* and *Jurassic Park* which present realistic problems that call for geometric investigations.

•**Concepts in Algebra: A Technology Approach** (formerly called Computer-Intensive Algebra) blends realistic situations and intensive use of technology to develop an intuitive understanding of algebraic ideas. Great for a middle school algebra program! For more information call Jansen at 1-800-322-MATH.

Clime Mtg...from page 4

evident to everyone. Brian noted the distinction between problems and projects. Not everyone is comfortable with doing projects, particularly in the mathematics classroom, because projects tend to be vaguely defined. *Microworlds Math Links* has several examples of more clearly-defined problems that students can explore. The hope is that these problems will motivate students and teachers to extend them into projects.

See Clime Mtg...page 11