PROBLEMS FOR FEBRUARY'09

1. Sum

Problem provided by Richard Neal, Editor, The Problem Solving Competition
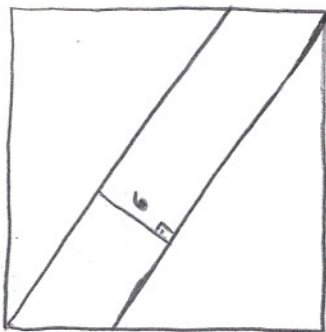
Find the exact sum value of

$$\Sigma_{k=1}^{\infty} \frac{k^2}{7^k}$$

2. A Trisected Square

Problem provided by Daryl Schwerdtfeger, Oklahoma City

A square is divided into three pieces of equal area by two parallel cuts, as shown. The distance between the parallel lines is 6 inches. What is the area of the square in square inches?

Winner gets a recognition on the problem board and the mathclub website and a $5 gift card from the bookstore.

Copies available below! Feel free to take one and enjoy! Submit your solutions to one of the Math Professors at school by March 1. You can also find a copy at the Math Club website at

http://faculty.randolphcollege.edu/ykurt/mathclub/mathclub.htm.