THE PROBLEM SOLVING COMPETITION
PROBLEMS FOR FEBRUARY'08

1. Solve the equation

Problem provided by Prof. Gro Hovhannisyan, Kent State University, Stark Campus

$$(\ln x)^2 - 2.5\ln(x)\ln(4x-5) + (\ln(4x-5))^2 = 0$$

2. Probability Density

Problem provided by Richard Neal, Editor *The Problem Solving Competition*

Find positive numbers b and k such that $f(x) = kx^3$ is a probability density function on $[0, b]$ with median 3.

Copies available below! Feel free to take one! Submit your solutions to any of the Math Professors at school by March 15. You can also find a copy at the Math Club website at
http://faculty.randolphcollege.edu/ykurt/mathclub/mathclub.htm

About the The Problem Solving Competition

This is a national problem solving competition organized by Dr. Richard Neal, president of ASM (American Society for Mathematics).Every month two problems are sent out to schools and posted for students to solve. Winners of the month are presented with a certificate and the top problem solvers qualify to attend the US National Collegiate Mathematics Championship to be held in Madison, Wisconsin, in August of 2008. The problems are posted at the Ethyl Center and copies are provided for you to pick up! Enjoy! For more information about ASM and the competition go to http://www.ascm.org/