

## PROBLEMS FOR OCTOBER'08

### 1. An Integral

Integrate

$$\int e^{\sqrt[3]{x}} dx.$$

Be sure to show all steps.

### 2. Speckled Eggs

Problem provided by Daryl Schwerdtfeger, Oklahoma City

Farmer Jones has 65 hens. If he had one more solid colored hen, then exactly one-third of his hens would be speckled. From years of experience, Farmer Jones knows that one-half of the speckled hens will lay speckled eggs and that each hen and a half will lay an egg and a half in a day and a half. After how many full days will Farmer Jones have 4 dozen speckled eggs to sell?

**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 **November 1**. You can also find a copy at the Math Club website at

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