



# Math Mole

May 31, 2005

Welcome to GSS 2005!

Volume 1, No. 1

## This issue

- Mathematician of the Day
- Quotes and a Puzzle
- Class Outline
- Today's Editor: Dr. Collins

### Quotes:

*The science of pure mathematics ... may claim to be the most original creation of the human spirit.*

– Alfred Whitehead, English mathematician and philosopher (1861-1947)

*I am interested in mathematics only as a creative art.*

– G.H. Hardy, English mathematician (1877-1947)

*No matter how correct a mathematical theorem may appear to be, one ought never to be satisfied that there was not something imperfect about it until it also gives the impression of being beautiful.*

– George Boole, English mathematician (1815-1864)

**Puzzle:** A Hershey's Chocolate Bar comes in a solid rectangle subdivided into a grid of 4 by 3 rectangles. Counting a 'break' as any time you take any solid piece and break it all the way through using a given subdividing line, what is the minimum number of breaks needed to completely divide a Hershey's bar into 12 pieces?

## Mathematician of the Day



Abu al-Khwarizmi - 780-850 (lived in present day Baghdad)

- Not much is known about the life of this mathematician.
- He is credited with two major creations (or discoveries):
  - He developed the Hindu-Arabic numerals.
  - He is the first to use 0
- The words "algorithm" and "algebra" are derived from his name.

Info From: <http://www-history.mcs.st-andrews.ac.uk/Mathematicians/Al-Khwarizmi.html>

## Assignment: Editor of the Day

Everyone gets to be Editor of the Day for the Math Mole newsletter. Your job as editor will be to fill the front page of the newsletter with the Mathematician of the Day and various quotes, puzzles, jokes or other amusements. Start looking for content. You can use the website I used at St. Andrews as a starting point for the MOTD. There are other links on the class webpage for other resources that you might want to use. Be creative!

*Governor's School is like Las Vegas in that everything that happens here, stays here, except if someone takes a picture of it, then it will surely show up on the internet.*

– Dr. Collins, GSS Observer

## Notes

### Key Ideas

Mathematical World

Axiom

Definition

-Overloaded Equality

-Axiom of Equality

Statement

Conjecture

Proposition

Theorem

Proof

Logic

-axiom of excluded middle

-and, or, not

Truth Table

Proof by Exhaustion

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Homework: