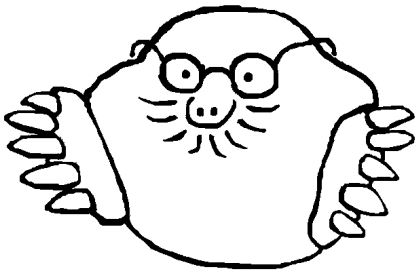

Math Mole

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This issue

- Mathematician of the Day
- Puzzle
- Today's Editors: Aly & Kia
- Wednesday: Jim & Dr. C

Puzzle:
A Sudoku (on the back)

Mathematician of the Day

Gottfried von Leibniz (1646-1716)

- At the age of 12 he was trying to improve AristotleâĂŹs logic with orderings on logical truths.
- He entered the University of Leipzig at the age of 14.
- He earned a doctorate in law at Altdorf in 1667.
- Went to Paris in 1672 where he met many mathematicians and philosophers. He began to study math and physics under Christiaan Huygens.
- He went to London on a peace mission and developed contacts in the Royal Society of London that made him more interested in mathematics.
- In the 1670âĂŹs in Paris, Leibniz developed the basics of his version of calculus. He was contacted by Newton via letters about NewtonâĂŹs calculus. The letters took so long to arrive that Newton suspected Leibniz had stolen his methods.
- He developed binary arithmetic system.

Info From: `http://www-history.mcs.st-andrews.ac.uk/Biographies/Leibniz.html`

Math Spotlight: The Golden Ratio

The golden ratio is also known by the divine proportion, golden mean, or golden section. The number can be found when taking the ratio of the distances of regular geometric pentagons, pentagrams, decagons, and dodecahedrons. It is denoted by ϕ or sometimes τ

Pythagoras and his followers are credited for the discovery of the golden ratio.

Two quantities are in the golden ratio if the ratio between the sum of those quantities and the larger one is the same as the ratio between the larger one and the smaller.

Algebraic expression: $\frac{a+b}{a} = \frac{a}{b} = \phi$

The only positive solution: $\phi = \frac{1+\sqrt{5}}{2} \approx 1.6180339887...$

The golden ratio is often used as a model in architecture and art. The ratios of the Great Pyramid of Giza and the Parthenon's dimensions are close to the golden ratio. Leonardo da Vinci created his Vitruvian Man and the Mona Lisa following the golden ratio, and Salvador Dali's The Sacrament of the Last Supper has many golden rectangles within it.

The golden ratio also plays a role in human perception of beauty.

			6	7			2	3
				9	5			1
			2			8		9
1		2			9			
				8				
			5			7		2
8		6			1			
4			9	2				
9	2			3	6			