



Hungarian Paul Erdős, the most prolific mathematician of the 20th century, died on this FAMUS day in 1996.

"Is this the bathroom?"
-What Erdos asked me after walking into my very tiny and windowless office when I was a graduate student in 1992.

FAMUS [Friday Afternoon Math Undergrad Seminar] meets:

- every Friday
- at 3:00 p.m.
- in Room 164
- of the Adel Mathematics Building

[and snacks are always served!!!!]

Sept. 20th topic

Egyptian Fractions

[presented by Jeff Rushall]

Sept. 20th guest

Gabe Markou

EGYPTIAN FRACTIONS

Find out how Ancient Egyptians did fractions and solve the maze.

HEROGLYPHS FOR NUMBERS
Hieroglyphs are what we call the writing and pictures on the walls and objects (some called) of Ancient Egypt. Here are the hieroglyphs for numbers.

THE EGYPTIAN WAY
The Egyptians wrote their hieroglyphs left to right, right to left or up and down. The direction of the writing is shown by the way they are facing.

THE EYE OF HORUS
A special set of measures based on the 'Eye of Horus' was used for things such as grain. Each of the six parts of the 'Eye' were used to show a different fraction.

MARKING EGYPTIAN FRACTIONS
The Egyptian would write a fraction like $\frac{1}{2}$ as a sum of unit fractions. I could be written as $\frac{1}{2} + \frac{1}{2}$ which is $\frac{1}{1}$.

Other numbers were shown to be fractions by putting a hieroglyph symbol above or to the side of a number hieroglyphic.

UNITY FRACTIONS
Almost all the fractions used were unity fractions, as $\frac{1}{8}$ unit fraction, so we call it $\frac{1}{8}$. All fractions with '1' in the numerator are unit fractions.

EGYPTIAN FRACTIONS
The Egyptians had a special hieroglyph for a half.

Other numbers were shown to be fractions by putting a hieroglyph symbol above or to the side of a number hieroglyphic.

THE MAZE
I have 7 loaves to share equally between 8 people. How much should each person get?
They should get $\frac{7}{8}$ each.

Can Bastet, Khnum and Ra each find a path to a different Obelisk? The routes must ONLY cross the unit fractions on the scrolls that sum to the fraction that each god is holding. (Ra has worked out his already.)

How could you write $\frac{1}{2}$ using only unit fractions?

ALL MATHEMATICS MAJORS ARE ENCOURAGED AND EXPECTED AND ENCOURAGED TO ATTEND