

Math Mole

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- Today's Editors: Feiran & Steven
- Thursday: John & Eddie

Quotes:

Words differently arranged have a different meaning and meanings differently arranged have a different effect. –Blaise Pascal

Proof is the idol before whom the pure mathematician tortures himself. –Sir Arthur Eddington

There are three kinds of lies: lies, damned lies, and statistics. –Benjamin Disraeli

Puzzles:

Consider the magic square

8	1	6
3	5	7
4	9	2

One: Find the pattern in laying out the numbers from 1-9.

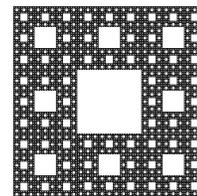
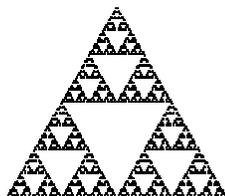
Two: Apply this same pattern to lay out the numbers 1-25 in a 5×5 magic square.

Mathematician of the Day



Waclaw Fanciszek Sierpinski

- Waclaw Fanciszek Sierpinski was born on March 14, 1882 and died on October 21, 1969.
- He made many contributions to set theory by researching the axiom of choice, the continuum hypothesis, number theory, and the theory of functions and topology.
- He also computed the first absolute normal number which is a number whose digits (in ever base) show a uniform distribution.
- The Sierpinski number is an odd natural number k , such that integers of the form $k2^n + 1$ are composite. Sierpinski proved that an infinitely many odd integers produced no primes when used as k .
- Some fractals were named after him because they used what was known as the Sierpinski numbers. These include the Sierpinski triangle, the Sierpinski carpet and the Sierpinski curve.



Career Spotlight: Cryptologist

Job Description: Cryptologists analyze a system of information to discover concealed facets within that system. Cryptology is recommended for people who enjoy logic problems, working with computers, reading and writing, and have a vivid imagination. Companies with cryptology positions include technology companies, credit card companies, government agencies, and universities.

Education: English, Research, Computer Science, Cryptography, and Communications are recommended areas of study, but no specific degree is required. Accepted majors include Mathematics, Music, Engineering, History, Computer Programming, and Chemistry.

Work Conditions: Cryptologists usually work in an isolated environment with a variety of data.

Salary and Outlook: Cryptologists earn anywhere from \$60,000 to \$125,000 with a median salary of \$83,000. According to the NSA, the demand for cryptologists will remain constant despite global changes.

Sources:

http://www.nsa.gov/CAREERS/careers_8.cfm?#ts4

<http://www.nsa.gov/kids/home.cfm>

<http://careersthatdontsuck.com/2007/02/24/career-profile-cryptologist/>