

# Math Mole

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Craft Day!

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- Today's Editor: Alina
- Wednesday: Dalton

### Quotes:

*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

*In mathematics you don't understand things. You just get used to them.* — Johann von Neumann

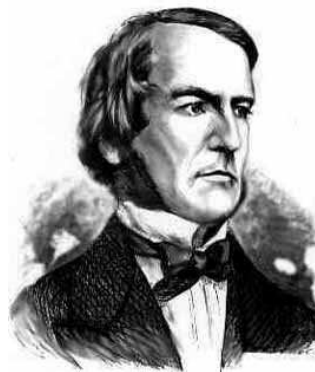
### Puzzles:

**Cut Cube:** A solid, four-inch cube of wood is coated with blue paint on all six sides.

Then the cube is cut into smaller one-inch cubes. These new one-inch cubes will have either three blue sides, two blue sides, one blue side, or no blue sides. How many of each will there be?

**Ages:** 5 years ago Kate was 5 times as old as her Son. 5 years hence her age will be 8 less than three times the corresponding age of her Son. Find their ages.

## Mathematician of the Day



George Boole: November 2, 1815; Lincoln, England thru December 8, 1864; Ballintemple, Ireland

- Developed Boolean Algebra, a system of algebraic notation used to represent logical propositions; Boolean Algebra is used heavily in computing and electronics today
- George Boole was born to a shoemaker, John Boole, who gave his son his first lessons in mathematics; Boole's favorite subject was originally the classics
- At 16, he began work as an assistant teacher at a local school in Doncaster because he was forced to support his family at the collapse of his fathers' business. In 1834, at the age of 19, he opened his own school in Lincoln, while studying the works of Lagrange and Laplace, works on which he would base his first paper
- In August of 1849, Boole became the first professor of mathematics at Queen's College, Cork, England; he held this position for the rest of his life
- Boole's most important work was published in 1854: An investigation into the Laws of Thought, on Which are founded the Mathematical Theories of Logic and Probabilities
- This work dealt with approaching logic in a new way; reducing logic to simple algebra, and thus incorporating logic into mathematics
- He was one of the first to investigate basic properties of numbers such as the distributive property
- He published about 50 papers in his lifetime
- George Boole married Mary Everest; together, they had 5 daughters
- Died in 1864 due to attack of fever that ended in effusion of the lungs

Info From: <http://www-groups.dcs.st-and.ac.uk/history/Biographies/Boole.html>

[http://en.wikipedia.org/wiki/George\\_Boole](http://en.wikipedia.org/wiki/George_Boole)

## Career Spotlight: Computer Systems Analyst

**Job Description:** Computer systems analysts help all organizations to use technology effectively and to incorporate rapidly changing technologies into their existing systems. They help solve computer problems and use computer technology to meet the needs of an organization. Most systems analysts work with specific types of computer systems—for example, business, accounting, or financial systems. To begin an assignment, systems analysts consult managers and users to define the goals of the system. Analysts then design a system to meet those goals.

**Education:** Employers usually prefer applicants who have at least a bachelor's degree. For specified fields, especially those in the science or technology disciplines, it is recommended that the applicant has a bachelor's degree in a technical field, such as computer science, applied mathematics, and engineering. Despite the preference for technical degrees, however, people who have degrees in other majors may find employment as systems analysts if they also have technical skills. Courses in computer science or related subjects combined with practical experience can qualify people for some jobs in the occupation.

**Work Conditions:** Computer systems analysts work in offices or laboratories in comfortable surroundings. They usually work about 40 hours a week—about the same as many other professional or office workers. Evening or weekend work may be necessary, however, to meet deadlines or solve specific problems. Many analysts telecommute, using computers to work from remote locations. Like other workers who spend long periods typing on a computer, computer systems analysts are susceptible to eyestrain, back discomfort, and hand and wrist problems such as carpal tunnel syndrome or cumulative trauma disorder.

**Salary:** Median wage earnings of computer systems analysts are \$69,760 with the highest ten percent earning more than \$106,820. Starting salaries are about \$50,000, depending on the specialty.

**Job Outlook:** Employment opportunities are expected to grow by 29% between 2006 and 2016 for computer systems analysts. Demand for these workers will increase as organizations adopt more sophisticated technology.

Source: <http://www.bls.gov/oco/ocos287.htm#outlook>