This issue

- Mathematician of the Day
- Quote of the Day
- Puzzles
- Math Spotlight
- Today's Editor: Dr. Collins

Quote: *The truth knocks on the door and you say, "Go away, I'm looking for the truth," and so it goes away.*

– Robert Pirsig, from *Zen and the Art of Motorcycle Maintenance*.

Puzzles:

Friends: Frank weighs half as much as Bill and Hubert weighs three times as much as Frank. Their combined weight is 720 points. How much does each man weigh?

The Locker Problem: At a school there are 1000 lockers numbered from 1 to 1000 and 1000 students each assigned a certain locker. One day, as a school prank, they decide to go through the school one by one and open or close the lockers according to the following rule: If you are assigned locker M then you change the state (i.e. from closed to open or open to closed) of every locker that is a multiple of M. If the students go in, in order, from number 1 to number 1000, which lockers will be open at the end of the prank?

Mathematician of the Day
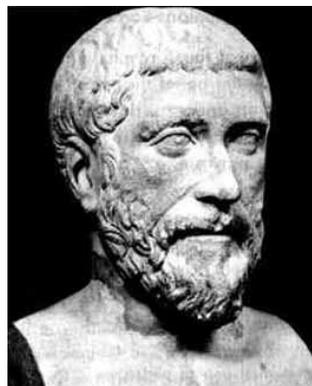
Pythagoras of Samos, 569-475 BC (Samos, Ionia)

- Pythagoras was a Greek philosopher who made important contributions in mathematics, astronomy, and the theory of music. He is considered by some to be the first mathematician.

- He created a secret society which was based on both scientific and religious ideas. It's secrecy means that very little is known about him and his work.

- The theorem now known as Pythagoras's theorem was known to the Babylonians 1000 years earlier but he may have been the first to prove it.

- In astronomy Pythagoras taught that the Earth was a sphere at the center of the Universe. He also recognized that the orbit of the Moon was inclined to the equator of the Earth and he was one of the first to realize that Venus as an evening star was the same planet as Venus as a morning star.

- Pythagoras noticed that vibrating strings produce harmonious tones when the ratios of the lengths of the strings are whole numbers, and that these ratios could be extended to other instruments.

Info From: `http://www-groups.dcs.st-and.ac.uk/ history/Biographies/Pythagoras.html`

Mathematics Spotlight: Four Color Theorem

Are four colors always enough to color any map so that no two contiguous countries that share a border (in more than single points) have the same color?

It is easy to show that you need at least four colors. (Try drawing an example). But it was a long standing conjecture that you could always color a map with just 4 colors. It was proved that 4 colors are sufficient although the proof itself caused some problems as it required the use of a computer to check 1936 cases that all other situations reduced to.

Info from: Su, Francis E., et al. "Four Color Theorem." Mudd Math Fun Facts. <http://www.math.hmc.edu/funfacts>.