Simon Stevin was born in Flanders and lived from 1548 to 1620. Stevin was special in that he wanted scientific and mathematical discoveries to be shared with all people—not just the scholars. Many of the books and papers he published were to teach everyone even though he was employed by Prince Maurice of Orange.

**Major Accomplishments**

Stevin is best known for popularizing use of the decimal system—for he published a paper which in less than forty pages which explained why everyday people should use decimals vs. fractions. Scholars had been using decimals for hundreds of years but the normal people had no idea.

Stevin “discovered” gravity. Years before Galileo or Isaac Newton’s famous experiments with gravity, Stevin published an experiment in which he determined that a heavy object fell to earth at the same rate as a light object.

Stevin wrote in Dutch because he wanted the normal people to understand what scholars were doing and he thought Dutch was much more useful than Latin or Greek. He wanted to teach the everyday people as well as the princes.

Stevin was the first European to use a base twelve system to mathematically create a new type of music which was “Equally Tempered”.

**Equal Temperament**

What was this new approach to music? Wu Zaiyu, a Chinese scholar-prince actually discovered it before Simon Stevin, who did a great job of spreading the idea in Europe. Both Wu Zaiyu and Stevin used mathematics to create equal distances in an octave. This equal distance between notes is called “Equal Temperament”. In the beginning there was a big fight over whether the old way “Natural Tuning” would win or whether the new “Equal Temperament” way would win.

J. S. Bach wrote an entire piece of music called “The Well-Tempered Clavier” in order to show off how useful this new base-twelve system of tuning would be for musicians. The base-twelve system of Equally Tempered notes won and it has dominated western music even until today.

---

Editor’s Note: Mr. Simon was 8 years old when he dictated this report to his mother Jen Seron, based on readings they found together. Dan presented an oral report at the 2008 NYCHEA History Fair 17 November 2008. in NYC at the Jefferson Market Branch of the New York Public Library in Manhattan. He read it aloud to about four dozen people in attendance. See page nine for some of Mr. Simon’s resources.
problem from last issue:

Find the base, $b$, used in each of the following. Hints: Each equation is written in its base, $b$.
For example $47 = 4b + 7$ and $b > 7$. The base of a logarithm is an integer $> 1$.

1.) $\log_b 24 - \log_b 3 = \log_b 8$
2.) $2 \log_b 5 = \log_b 31$
3.) $\log_b 4 + \log_b 30 = \log_b 100$
4.) $\log_b 100,000 = 101$
5.) $-\log_b 100 = -2$
6.) $\log_b 5 = -2$

Solution on page 23;

Continued from page 8;


The Discovery of Musical Equal Temperament in China and Europe in the Sixteenth Century


http://www.wikipedia.org/wiki/Simon_Stevin Editor’s Note: Mr. Simon used this site to provide a freely licensed image of Simon Stevin, which is not used in this article. Instead, the DSA provides its own archive photograph of the statue of Simon Stevin.


The Following Are Now Available from the Society

1. Our Brochure, Free
4. Back issues of the Duodecimal Bulletin, as available, 1944 to present, $7.20 each.
5. TGM: A Coherent Dozenal Metrology, by T. Pendlebury, $1.44.
6. Modular Counting by P. D. Thomas, $1.44.
7. The Modular System by P. D. Thomas, $1.44.

9; nine