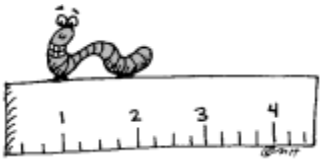
MATH, HISTORY, PHILOSOPHY, MUSIC, KARAOKE

"Mathematics does to the mind what music does to the soul and poetry to the heart."

Music and Math: Singing for Success

National Council of Teachers of Mathematics
2013 Conference
Denver, Colorado



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Math Songs Links

- **MathWire.com http://www.mathwire.com/music/music.html**
  PDF file of math songs and tunes found on MathWire site:
- **Math Songs Sing-a-Long [Algebra & beyond]**
- **Dr. Lesser's Math Songs**
  http://www.math.utep.edu/Faculty/lesser/GreatestLESSERhits.html
- **The Rappin' Mathematician (songs in video)**
  http://alexkajitani.com/videos.html

Other Links

- **http://www.thebigview.com/greeks/pythagoras.html**
- **http://www.newgenevacenter.org/biography/pythagoras2.htm**
- **http://guitar-primer.com/Folk/Fingers.html**
- **http://www.math.niu.edu/~rusin/uses-math/music/**
- **http://www.homepages.kcbbs.gen.nz/rtomes/alex-ha.htm**
- **http://www.library.scar.utoronto.ca/ClassicsC42/Holder/MUSIC.HTM**
- **http://www.infoplease.com/ipea/A0151192.html**
- **http://science.yourdictionary.com/articles/how-does-music-affect-the-brain.html**
- **http://teachertube.com/viewVideo.php?video_id=110975 (Donald Duck in MathLand)**

Middle School Math Music CDs

☆☆☆ • **Math Rocks – Volume 1 : www.rocknresources.com**

☆☆☆☆ • **The Rappin' Mathematician: http://alexkajitani.com/**

☆ • **New Horizons: mathmelodies.com**

☆☆☆ • **Math Rap: www.flocabulary.com**

☆ • **Math Odes – Algebra I and Geometry : www.mathodes.com**

☆☆☆☆ • **Middle School MATH MUSIC: http://www.songsforteaching.com/**

☆☆☆ • **TriangleHead: http://www.songsforteaching.com/**

☆☆☆ • **The All-Inclusive Groove http://www.songsforteaching.com/**

Other Math Music CDs

- **School House Rock: Multiplication**
- **Multiplication Rap & Hip Hop**

Mnemonic Math Jingle Assignment

You will be creating your own mnemonic device in the form of a jingle or song in order to help you remember a mathematical concept.

❖ Recall that an example of a mnemonic device is PEMDAS – used to remember the Order of Operations.

PEMDAS helps us remember the Order of Operations by taking the first letter from key words from the concept (parentheses, exponents, multiplication, division, addition and subtraction) and creating another word to make a silly sentence.

King Henry Died Uptown Drinking Chocolate Milk (KHDUDCM) for Kilo, Hecto, Deci, Unit, Deci, Centi, Milli is another silly sentence mnemonic device that helps us to remember the place values of the metric prefixes.

Another well-known example of a mnemonic device is the Alphabet Song that takes the letters of the alphabet and sets them to the familiar melody *Twinkle Twinkle Little Star. Everyone remembers singing, "A, B, C, D, E, F, G……. and now I know my ABCs."*

1. Your song or jingle must have a title that identifies the mathematical concept (ex: *The Integer Operations Song* or *The Decimals to Fractions to Percents Song*).
2. The lyrics of the song or jingle must contain a mnemonic device.
3. Your song or jingle may be any length, as long as it effectively teaches the chosen mathematical concept.
4. The song should be finalized using software such as Audacity, *GarageBand,* or *HomeStudio.*
5. You will record yourself singing, speaking, or rapping the lyrics of your song.
6. The melody/tune of the song or jingle may either be your original tune or it may be from an existing song.
7. Save your song as an MP3 file by exporting the file to *iTunes.*

Integer Song Project

Singing, Rapping, and Rhyming With Integers

We have been studying integers in math recently. As a strategy to add integers we sang a very simple adding integer song to the tune of "Row, Row, Row Your Boat."

Same signs add and keep,
different signs subtract,
keep the sign of the higher number,
then it will be exact!

For this project, you are to create your own song (sung to a known tune, Karaoke style) or a rap. You may choose to write a rhythmic poem instead. Your project must be developed in such a way that it will help other math students remember the strategies/rules for adding, subtracting, or multiplying/dividing integers. (The categories: 1. ADDING INTEGERS 2. SUBTRACTING INTEGERS 3. MULTIPLYING/DIVIDING INTEGERS)

Students choosing to develop a song may work together and perform in a group of up to 3 people. (I expect a group of 3 to have a much longer song or rap than the example that you see above.) You may choose to create a poem instead of a song or rap. If you write and perform a song or rap, each group member must take part in the performance. Poems may not be worked on as a group. They must be written individually.

EXTRA CREDIT: If you address more than one computation of integers strategy in your project, you will earn extra credit.)

Students creating more than one poem or song or including all three categories in their song or poem(s) will earn the most extra credit. For example, one student might create an adding integers song, a subtracting integers poem, and a multiplying/dividing integers limerick. Another student might write three different limericks, one about adding integers, one about subtracting integers, and the third about multiplying/dividing integers.

I will add a point to report card averages for each extra credit integer rap, rhythmic poem, or song created by students. Students may sign up to share their performances, generally one or two performances per day. A sign-up sheet will be posted. The final date will be one week before the end of the 3rd quarter. Students presenting early will be able to earn extra points on the required project/test grade. (I will add the early bird points to a bonus test grade for regular students as well as add points to their report card average.)

Ideas for Presenting/Sharing Your Project

You may present your project in various ways such as:

- Create and present a PowerPoint with the words and/or music and teach your song, rap, or poem to the class using the karaoke machine microphone.
- Create and present a Photostory file with pictures and the words and/or music and teach your song, rap, or poem to the class.
- Video your performance and share it with the class, teaching them the song, rap, or poem.
- Use the classroom karaoke machine to play your music from a CD or IPod and sing the words from handouts or a PowerPoint and teach your song to the class.
- Provide your teacher with a copy of the words to your song, rap, or poem a few days ahead of time so that copies may be made for the class.