MATHEMATICAL IDOL

(...isn't that special?)

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(Did you ever notice that idol is just two letters away from idiot?)

Circle Song

(Are you Sleeping Brother John?)
A equals Pi R^2 Area, Area
C equals Pi times diameter, Circumference, Circumference!

Slope Song

(Turkey in the Straw)

Slope is rise over run as we all know.
With the Y's on the top and the X's below.
Subtract the terms to get it right.
Simplify last for a wonderful sight.

(Chorus)
Rise over run, Y's over X.
Rise over run, Y's over X.
Subtract the terms to get it right.
Simplify last for a wonderful sight!

Y= MX + B

(YMCA)

Freshmen, we need to graph a straight line.
I said, freshmen, we will have a great time.
I said, freshmen there's no reason to whine.
There's no reason to be unhappy.

It's fun to graph y = mx + b
y = mx+ b
It makes a straight line and it'll be fine
You can even find the slo-ope!

(repeat)

Note: Demonstrate and rehearse the actions for y, m,x, and b before singing.

Quadratic Equation Song
(Pop Goes the Weasel)

$$X = \frac{-B \pm \sqrt{B^2 - 4\,AC}}{2A}$$

X equals negative B plus or minus the square root
Of B squared minus four AC,
All over two A!

Discriminant Rap
(Get a good rap beat going)

B squared minus four AC!
How many answers will there be?
Positive 2   (Jump to the right)
Negative none   (Jump to the left)
Zero only one!   (Jump to the center)

Have students imagine a number line on the floor in front of them.
(Note that "none" refers to no real answers, but there could be complex numbers.)

Critical Numbers Cadence
(Marching cadence ala the Marines)

I don't know but I've been told,
 (repeat)
My math teacher is not old!
(repeat)
Numbers critical we find
(repeat)
At zero or undefined.
(repeat)

Sound off!
Up, down, max, min, meaning give
To the first derivative!

X to the Zero Power
(Day-O Banana Boat Song)

(Chorus)
Zero! I say ze-e-e-ro.
X to the zero power is one.
(Repeat)

(Verse)
Hey Mr. Tally man tally me exponents.
X to the zero power is one.
(Repeat)

(Chorus)
Zero! I say ze-e-e-ro.
X to the zero power is one.
(Repeat)

(Verse)
One power two power three power four.
X to the zero power is one.
Add those exponents let's do some more.
X to the zero power is one.

(Chorus)
Zero! I say ze-e-e-ro.
X to the zero power is one.
(Repeat)

We Will Graph You!
(We Will Rock You)

Buddy you're tryin' to draw the line
For the m and the b that we're assigned:
Ain't hard you see, put your pencil on the b,
One more point will guarantee that…
We will, we will graph you!
We will, we will graph you!

So now you know the y-intercept;
Here's how we find the rest of it:
Up with rise, across for run,
Plot another point and when they're done sing…
We have, we have graphed you!
We have, we have graphed you!

SOHCAHTOA!
(Handel's Hallelujah Chorus)

Soh Cah Toa!
Soh Cah Toa!
Learn it, and use it!
Soh Cah Toa!

Sine is opposite over hypotenuse.
Soh Cah Toa
Soh Cah Toa
Learn it, and use it!

Cosine is adjacent over hypotenuse.
Soh Cah Toa
Soh Cah Toa
Learn it, and use it!

Tangent is opposite over adjacent!
Soh Cah Toa
Soh Cah Toa

SOH CAH TOA!

Product Rule for Derivatives
(Twinkle Twinkle Little Star)

One D-two plus 2-D one.
That's the way we get it done

Quotient Rule for Derivatives
(Angels We Have Heard on High—Gloria)

Low D-high minus high D-low
Draw the line and down below
Denominator squared will go!

Matrix Multiplication
(My Darling Clementine)

Row by column, row by column,
Multiply them line by line.
Add them up to form a matrix,
Now you're doing it just fine!

The Distance Formula
(On Top of Old Smokey)

When finding the distance
Between two points,
Subtract the two x's
Do the same for the y's.
Now square both these numbers,
And find out their sum.
When you take the square root
Then you are all done!

Adding Integers
(Row, Row, Row Your Boat)

Same signs add and keep
Different signs subtract
Use the sign of the bigger number
Then you'll be exact

Multiplying and Dividing Integers
(Are You Sleeping Brother John)

Multiplying and dividing
Use same sign
Use same sign
You will get a positive
You will get a positive
You'll be fine
You'll be fine

The Quadratic Formula Song
(An original piece by Mike Kelly)

Optional Props:
- Cowboy hat
- Baseball cap
- Choir robe
- Baton
- MP3 or other music files can be useful if students have trouble recognizing the tune you are singing
- A guitar would be nice if you could actually play…

What you lack in talent you can make up with enthusiasm!

Cindy's class singing slope song and quadratic equation song
http://www.sdctm.org/video/mathidol.htm

The quadratic formula song by Mike Kelley
http://www.calculus-help.com/funstuff/calculussongs.html

More math songs and poems
http://www.mscc.cc.tn.us/webs/vyoung/songs/Main_Pages/Tables.htm

South Dakota Council of Teachers of Mathematics official website
http://www.sdctm.org/