Notes for Desmos Workshop

Monday, March 8, 2021 12:36 PM

We're on a mission to help every student learn math and love learning math.
-Desmos website

The purpose of computation is insight, not numbers.
-Richard Hamming (1915 - 1998)

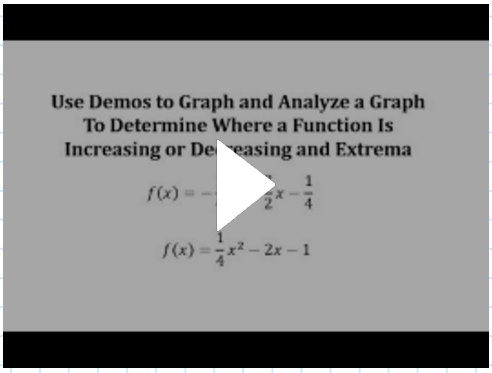
The best way to learn is to do.
-Paul Halmos (1916 - 2006)

Make mathematics breath with Desmos.
-Alex (1961 - still going)

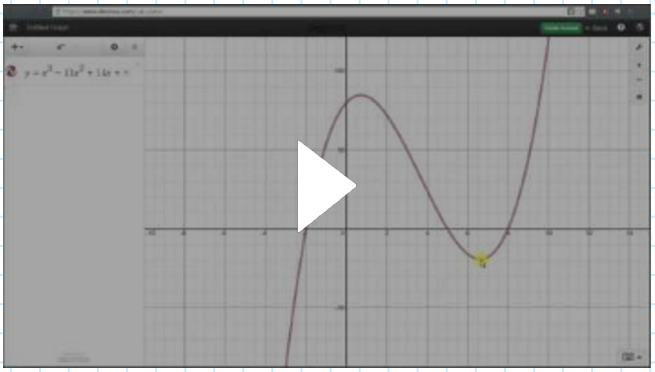
I. **Using Desmos in the Classroom (My Stuff:** http://alexambrioso.com/desmos
   - Polar Graphs: MAC 1114, MAC 2312, MAC 2313
   - The Unit Circle and the Sine Function (MAC 1114)
   - The Secant Line Approaches the Tangent Line (MAC 2311)
   - Newton's Method (MAC 2311)
   - Simple Harmonic Motion: MAC 1114, MAC 2311, MAC 2312, MAC 2313, MAP 2302
   - Euler Method (MAP 2302): Hidden Figures (2016) and Women's History Month
   - Taylor Polynomials: MAC 2312
   - Mean Value Theorem: MAC 2311
   - Polar Conic Sections: MAC 2312
   - Tangent and Polar Coordinates: MAC 2312
   - Circle of Curvature: MAC 2313
   - The Limit: MAC 2311
   - Using Polar Coordinates to rotate a parabola: MAC 1114, MAC 2312

II. **Desmos Calculators**: See Math Tools drop-down window at top of home page and or app stores
   - For use when testing. See: https://www.desmos.com/test-mode
   - Graphing Calculator: https://www.desmos.com/calculator
   - Scientific Calculator: https://www.desmos.com/scientific
   - Four Function Calculator: https://www.desmos.com/fourfunction
   - Matrix Calculator: https://www.desmos.com/matrix
   - Geometry Calculator: https://www.desmos.com/geometry

III. **Source of Other Contents**
   - **Teacher Desmos**
     - Featured Collections (DL Calculus): https://teacher.desmos.com/collection/5e73b36a5141777627553357
     - Most Popular: https://teacher.desmos.com/popular
   - **Videos in Mathispower4u**: http://www.mathispower4u.com/ti-alternatives.php
     - Analyze a graph Using Desmos (Quadratic): Analyze a Graph Using Desmos to Determine Key Components of a Quadratic (Incr / Decr / Extrema)



- Determine the local/relative of Cubic Function: Ex 1: Determine the Local / Relative Extrema of a Cubic Function Using Desmos



IV. Accessibility Features

- **MathQuill**: Allows students to speak equations in an intuitive way.
- **JAWS, NVDA, Microsoft Narrator**: For spoken output.
- **Braille Mode**: For use with Braille computers.
- **Audio trace mode**: Allows exploration of a graph by sound.

V. Desmos Classroom: https://teacher.desmos.com/manage-classes

- LMS integrating with Desmos. Allows teach to manage a classroom of students using Desmos.
- Create highly interactive activities: https://learn.desmos.com/create
- Nice example: MarbleSlides: Lines