



some of the good stuff found at mathnstuff.com

Hi!

Here's some stuff many would consider unusual including: digital manipulatives, Sketchpads, spreadsheets, web pages, and, the things you can do with them.

The purpose of this page is to list the stuff so it may be presented in a video.

[pdf of page](#)

[video of page](#)

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Pre-K →

0:41-- Play the "Sum Thing Else Game," just find a match, keep the cards and go again

Elementary School - Arithmetic →

3:04 -- Add and subtract fractions, decimals, integers, on a nomograph

5:19 -- Add and subtract fractions with multiple strips and fraction bars

9:42 -- Verify a $\frac{1}{4}$ -bar with another $\frac{1}{4}$ -bar have the same length as a $\frac{1}{2}$ -bar.

-- Find "manipulatively" a fraction greater than $\frac{1}{4}$ but smaller than $\frac{1}{2}$ and verify the size through decimal approximation

12:04 -- Show me 35 cents. Show me 35 cents in another way

Middle School - Pre Algebra →

13:54 -- Divide the circle to compute its area

21:22 -- Reinforce mental computation and words like multiple, reciprocal, cube, double, and prime

High School - Algebra, Geometry, Algebra II, Statistics, Trig →

29:45 -- Make multiples of $x+2$ to represent $2(x+2)$ and $x(x+2)$ and $(x+2)^2$ and

-- Simplify algebraic expressions and solve equations using tiles and tokens

39:15 -- Run vertical and horizontal line tests and

-- Analytically take an inverse

43:34 -- With a Connect-the-Dots, Find Sides & Angles of a Right Triangle

Precalc →

44:01 -- Curve shift/ translate many functions

50:27 -- Determine if two angles are coterminal and

-- Define standard position

51:32 -- Build a polynomial or rational function

56:22 -- Assemble a Unit Circle jigsaw puzzle

58:48 -- Add vectors

Calc I →

1:02 -- Take a limit by approaching and Take a derivative by definition

1:09 -- Label a graph with function emojis< Mean Value Theorem, Rolle's Theorem

1:22 -- Graph the $\sin(x)$ and its 1st, 2nd, 3rd, and 4th derivatives using trace

1:26 -- Examine angle of elevation/depression and ladders with $h(x)$, $y(x)$, $h(y)$, $x(y)$, and h as variable, and h as a constant

1:30 -- Compute an Antiderivative by Reimann Boxes

Extracurricular ⇒

1:43 -- Play addition rummy with a deck of cards

1:44 -- "Roll" a die or pair of dice

History ⇒

1:45 -- Hold a shekel in your hands

1:46 -- Move an abacus very slowly

1:48 -- Use Napier's bones to multiply

Pre-K

- Play the "Sum Thing Else Game," just find a match, keep the cards and go again. The player with the most matches wins the game. Play with mathnstuff.com/papers/games/sumelse.xls

Elementary School - Arithmetic

- Add and subtract fractions, decimals, integers, on a nomograph, with mathnstuff.com/math/spoken/here/2class/130/nomogrf/nomogrf.xls
See: [Nomographs for Whole, Fraction, Decimal, and Signed Numbers](#) - instructions, and masters
- Add and subtract fractions with multiple strips and fraction bars, with mathnstuff.com/math/spoken/here/2class/60/strips.xls
See: [Multiple Strips & Fraction Bars](#) (Includes Instructions, masters)
- Verify a $\frac{1}{4}$ -bar with another $\frac{1}{4}$ -bar have the same length as a $\frac{1}{2}$ -bar.
Find "manipulatively" a fraction greater than $\frac{1}{4}$ but smaller than $\frac{1}{2}$ and verify the size through decimal approximation, with [/fract.xls](#)
- Show me 35 cents. Show me 35 cents in another way with mathnstuff.com/math/spoken/here/2class/70/70coins/coins.xls

Middle School - Pre Algebra

- Divide the circle to compute its area, with mathnstuff.com/math/spoken/here/2class/150/areaf.xls
See: [Area Formulas by Paper Cutting](#) (Includes Written Instructions)
See: [Area Circle Formulas by Paper Folding](#) (Includes Masters)
- Reinforce mental computation and words like multiple, reciprocal, cube, double, and prime with mathnstuff.com/papers/games/42.xls
See: [A Game for Two Players](#) (Includes Masters)

High School - Algebra, Geometry, Algebra II, Statistics, Trig

- Make multiples of $x+2$ to represent $2(x+2)$ and $x(x+2)$ and $(x+2)^2$ and Simplify algebraic expressions and solve equations using tiles and tokens, with mathnstuff.com/math/algebra/tt/create.xls
See: [Term Tiles & Tokens](#) (Includes The Entire Text Including Masters & Other Digital Manipulatives)
- Expand $(x+y)^3$, with mathnstuff.com/algebra/tt/tiles.xls [Term Tiles & Tokens](#) (Includes The Entire Text Including Masters & Other Digital Manipulatives)
- Run vertical and horizontal line tests and Analytically take an inverse with mathnstuff.com/math/gsp/sumr19/su19newgsp/inverse.gsp
- With a Connect-the-Dots, Find Sides & Angles of a Right Triangle & a Reward for Hot Work with mathnstuff.com/papers/condots/cool.htm
See: [Connect-the-Dots Puzzles](#) - arithmetic through calc I

Precalc

- Curve shift/ translate many functions with mathnstuff.com/math/gsp/sumr19/su19newgsp/parentFX2.gsp
See: [Exploring Functions](#) - Entire Book & Concrete Masters
- Determine if two angles are coterminal and Define standard position with mathnstuff.com/math/gsp/sumr19/su19newgsp/standardPosition.gsp
See: [Geometer's SketchPads](#) - Dozens w/ Content from arithmetic through calc I
- Build a polynomial or rational function with mathnstuff.com/math/gsp/sumr19/su19newgsp/compositeFx.poly.ratl.gsp
- Assemble a Unit Circle jigsaw puzzle with mathnstuff.com/math/spoken/here/2class/330/gif/jig1.xls
- Add vectors, with mathnstuff.com/math/spoken/here/2class/330/polrect.xls

Calc I

- Take a limit by approaching and Take a derivative by definition with mathnstuff.com/math/gsp/sumr19/su19newgsp/limit.gsp
See: [Limit Function - Take the limit as x approaches ...](#) -- Resources, Images, Instructions
- Label a graph with function emojis with

mathnstuff.com/math/spoken/here/2class/420/critical.htm

See: [Function & Graph Analysis & Emojis](#) 1st & 2nd derivatives, concavity, derivative

- Graph the $\sin(x)$ and its 1st, 2nd, 3rd, and 4th derivatives using trace with mathnstuff.com/math/gsp/sumr19/su19newgsp/DerAnyFx.gsp
- Examine angle of elevation/depression and ladders with $h(x)$, $y(x)$, $h(y)$, $x(y)$, and h as variable, and h as a constant with mathnstuff.com/math/gsp/sumr19/su19newgsp/elevation.gsp
- Compute an Antiderivative by Reimann Boxes
mathnstuff.com/math/gsp/sumr19/su19newgsp/ReimannSums.gsp
See: [Reimann Boxes & Sums, Integration & Teacher's Manual](#)

Extracurricular

- Play addition rummy with a deck of cards, with mathnstuff.com/papers/games/deck.xls
- "Roll" a die or pair of dice, with mathnstuff.com/papers/games/dice.xls

History

- Hold a shekel in your hands, with mathnstuff.com/math/xls/hands.xls
- Move an abacus very slowly, with mathnstuff.com/math/spoken/here/2class/40/40abacu/abacus.xls
With history/animation at [The Abacus](#)
See: [Ancient Computing Devises Used Digitally](#) - Fingers & Talley Sticks to Tokens & Coins to Banks to Abacuses to Napier's Bones Slide Rules
- Use Napier's bones to multiply with [Napier's Bones Digital Manipulative](#)
With instructions with mathnstuff.com/math/spoken/here/2class/60/nbones.htm



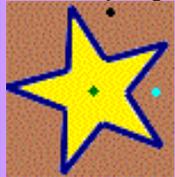
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All Videos



sorted by topic

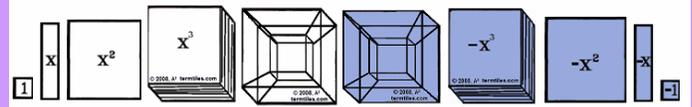


All Sketchpads

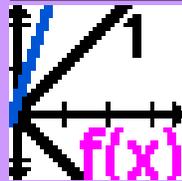
Digital Math Manipulatives

Make Math Move!

Digital Manipulatives



Term Tiles - Book, Digital, & Concrete Masters



Exploring Functions - Book, Digital, & Concrete Masters

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