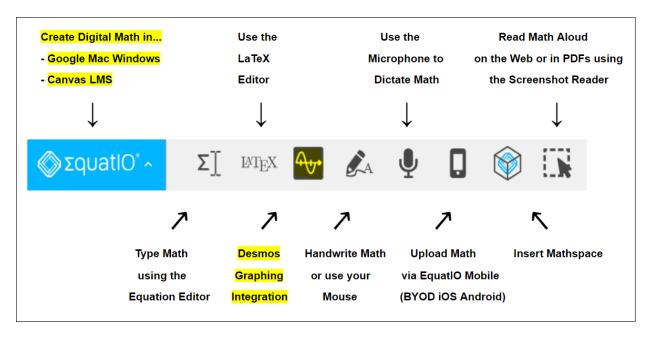




EquatIO lets everyone create digital math with no tricky coding or math languages to master. Input is easy, just type, handwrite, use your mouse, or dictate equations - formulas - and more!

EquatIO works with Mac, Windows and the G Suite...



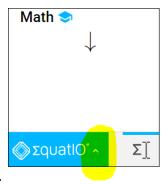
If you are new to EquatIO, let's start with the basics. Texthelp offers **Free-For-Teacher access** to all the premium features in EquatIO.

Please download EquatIO and register for your **Free-For-Teacher access** as detailed below...

- 1) Download Equatio for Google and Windows or Mac here (under Try Now)
- 2) Read&Write will read EquatIO math aloud, so we encourage you to download both solutions
- 3) Download Read&Write for Google here and Windows or Mac here (under Try Now)
- 4) To receive premium **Free-For-Teacher access** beyond the 30-day trial, teachers must register here.
- 5) Please accept permissions when you 1st open EquatIO (and Read&Write)



Click the EquatIO icon on your Google toolbar to open the program...



Then click the arrow in the blue EquatIO ribbon...

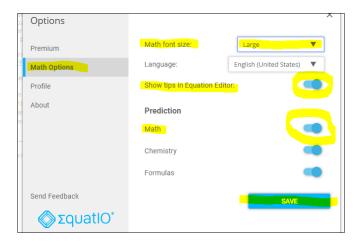




In the pic below, clicking 'Math Options' allows you to activate 'Show tips in Equation Editor' and 'Prediction' options.

EquatIO includes built-in prediction. Please watch this <u>video</u>, then decide which '**Prediction'** options you want turned on and click SAVE.

Review the list of EquatIO prediction items here for Math, Formulas, Chemistry and Speech Input.



EquatIO 'Math font size' options include Small - Regular - Large - X-Large and XX-Large . If you project EquatIO on a whiteboard in class, choosing X-Large or XX-Large will make it easier for everyone to follow along.

When using EquatIO to create a test/quiz/worksheet, we recommend choosing Large or X-Large. The math EquatIO inserts into your Word doc or G Doc/Form/Slide is an image. Using a larger math font size increases pixel count.

After you insert math into your Word doc or G Doc/Form/Slide, you can increase or reduce the image size as shown below. We think a higher pixel count provides a crisper image...

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

There are many ways to create math in EquatIO. Let's start by clicking on the 'Equation Editor' as shown below.

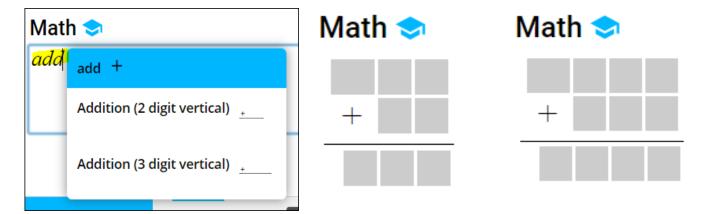


Next, place your cursor where it says 'Start typing here'...

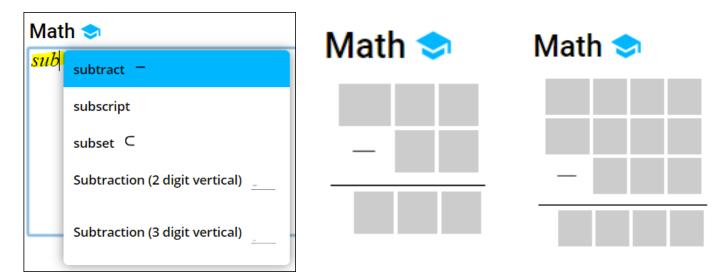




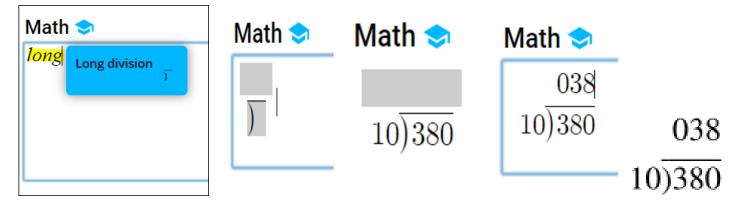
Type add for Addition 2 or 3 digit vertical



Type sub for Subtraction 2 or 3 digit vertical



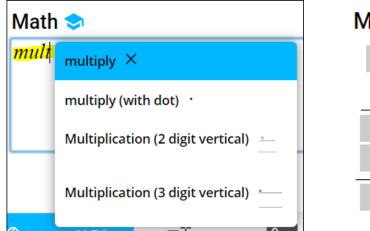
Type long for Long Division

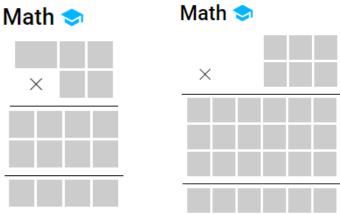




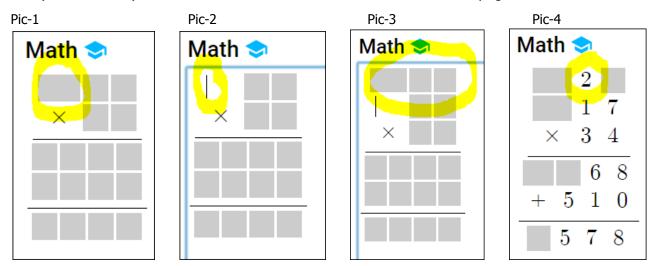


Type mult for Multiplication 2 or 3 digit vertical

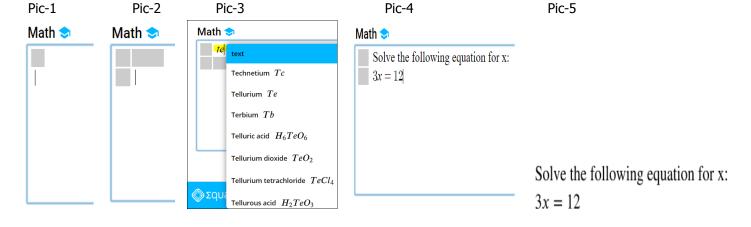




Let's add a row for carrying using the **Multiplication 2 digit vertical** to demonstrate. Place your cursor in the top-left field (Pic-1 and Pic-2) - then hit **`Shift-Enter**' to add the additional row for carrying.



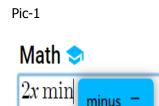
If you want to left align multiple lines of equations and/or text, hit '**Shift-Enter**' (Pic-1) then '**Shift-Space**' (Pic-2). Place your cursor in the top right field and type text (Pic-3) and continue on as shown in Pic-4. For Pic-5, I inserted the math into this Doc.

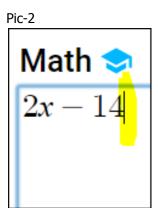


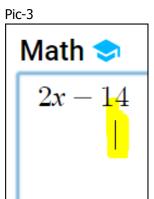


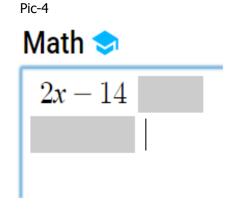


You can easily align multiple lines by the equal sign. Type **2x-14** then hit **'Shift-Enter'** (Pic-2 and Pic-3) and **'Shift-Space'** (Pic-4).











$$2x - 14 = 10$$



$$2x - 14 = 10$$

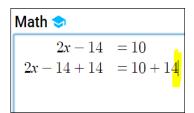
$$2x - 14 + 14$$

Math 🗢

$$2x - 14 = 10$$
$$2x - 14 + 14 = 10 + 14$$

Hit 'Shift-Control-Enter' to duplicate line-2 and continue solving...

Then hit 'Shift-Control-Enter' again

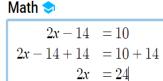


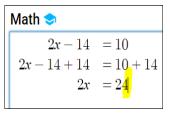
Math
$$\bigcirc$$

$$2x - 14 = 10$$

$$2x - 14 + 14 = 10 + 14$$

$$2x - 14 + 14 = 10 + 14$$





To solve...

Then click 'Insert Math'

Math 🖘

$$2x - 14 = 10$$

$$2x - 14 + 14 = 10 + 14$$

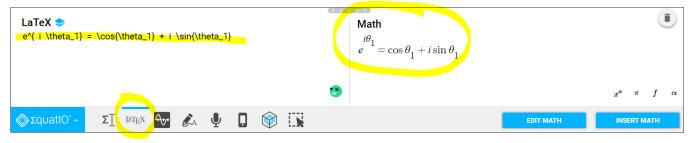
$$2x = 24$$

$$x = 12$$

$$2x - 14 = 10$$
$$2x - 14 + 14 = 10 + 14$$
$$2x = 24$$

If you know LaTeX, awesome! I pasted... e^{ i \theta_1} = \cos{\theta_1} + i \sin{\theta_1} ...into the LaTeX editor to create math - and inserted here... $e^{i\theta_1} = \cos\theta_1 + i\sin\theta_1$

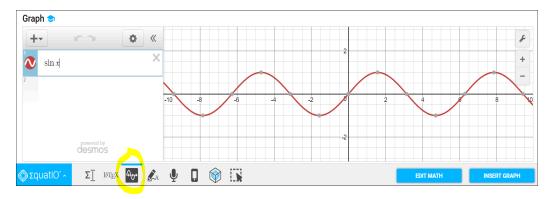
x = 12



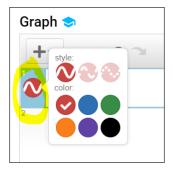




We'll try **Desmos Graphing** next - click the highlighted Desmos icon and type 'sinx' as show below...

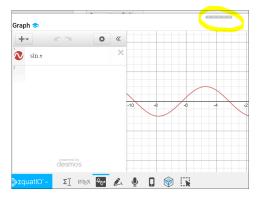


Place your cursor over the highlighted line graphic - then **'left click and hold'** to open the options menu - choose additional line and color options as show below.

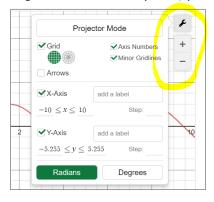


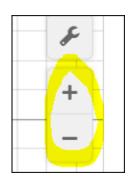
Quickly increase/decrease your work space in EquatIO with your mouse, moving the highlighted symbol up or down...





Access additional settings by clicking on the 'wrench' symbol, plus 'Zoom In' and 'Zoom Out'...

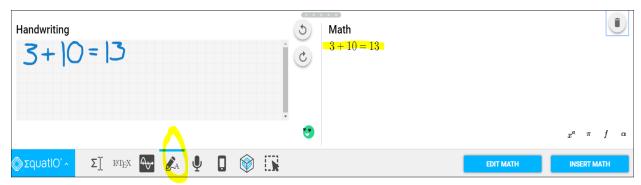




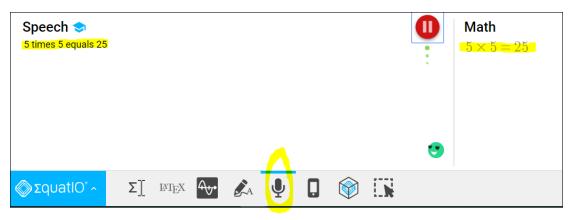




EquatIO's 'Handwriting Recognition' option works well with touchscreen devices. You can also use your mouse to write math as shown below...

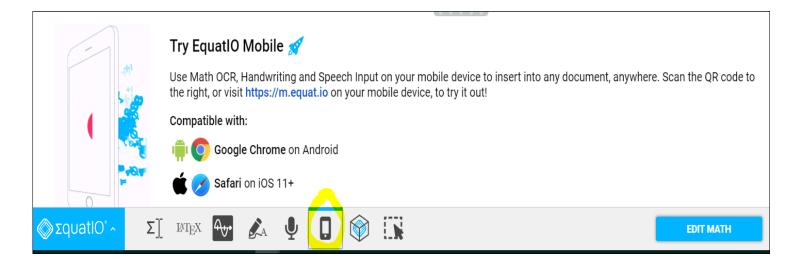


EquatIO's **Speech Input**' option let's you can dictate math. Click the highlighted microphone icon - then click the red button and start talking... 5 times 5 equals 25



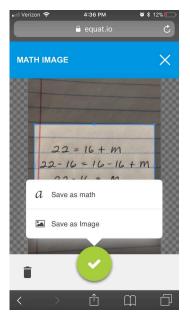
EquatIO Mobile lets you create math on iOS and Android devices. Please <u>watch this video</u>. If your district supports a bring their own device strategy, you can do some amazing things to engage these students.

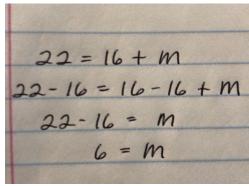
You can **Handwrite** - **Dictate** - or **Snap a Picture** of Math, then choose to **'Save as Image'** or **'Save as Math'** and upload the pics <u>into your doc</u> (see next page).











22 = 16 + m 22 - 16 = 16 - 16 + m 22 - 16 = m 6 = m

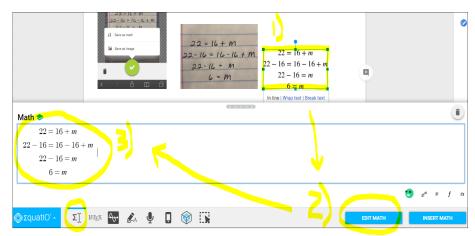
Your Android or iOS device

Save as Image

Save as math

Let's take it a step further. Use your cursor to...

- 1) Highlight the math as shown below
- 2) Click the blue EDIT MATH button
- 3) Use the Equation Editor to edit the problem and insert the revised problem below (40 = 8 + m)



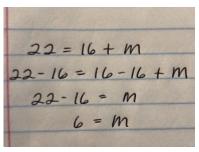
$$40 = 8 + m$$

$$40 - 8 = 8 - 8 + m$$

$$40 - 8 = m$$

$$32 = m$$

The 'Screenshot Reader' lets you do amazing things as well! Below is the inserted math pic from above. I clicked the Screenshot Reader icon in Pic-2, then used my cursor to highlight the math in Pic-1. The Screenshot Reader will OCR the math in Pic-1 and then read the math aloud.



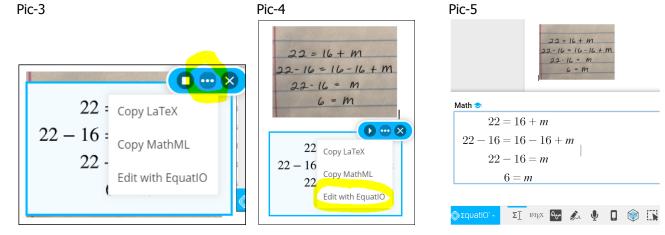
22 = 16 + m 22 - 16 = 16 - 16 + m 22 - 16 = m 6 = m

Pic-1 Pic-2



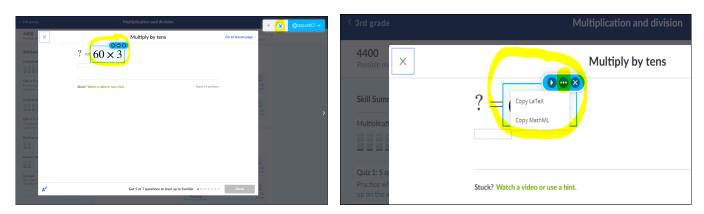


Clicking the highlighted symbol as shown in Pic-3 / Pic-4 opens a menu with additional options. Clicking **'Edit with EquatIO'** extracts the math into the Equation Editor as shown in Pic-5.



Let's think about what we've done. We started with handwritten math on a piece of notebook paper - snapped a pic on our phone and uploaded it into this Doc - then used the EDIT MATH button to extract the math into the Equation Editor. You can change out the numbers and insert the revised problem back into your doc. The Screenshot Reader offers additional flexibility. The end result is accessible, editable, digital math!

Don't forget to use the Screenshot Reader anywhere you encounter math on the web, like Khan Academy...

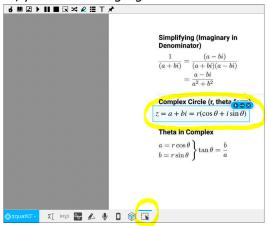


EquatIO also works in PDFs. For full functionality, **you must download** Read&Write for Google here (if you haven't previously), along with the Texthelp PDF Reader here. Don't forget to register for Read&Write **Free-For-Teacher** access here.

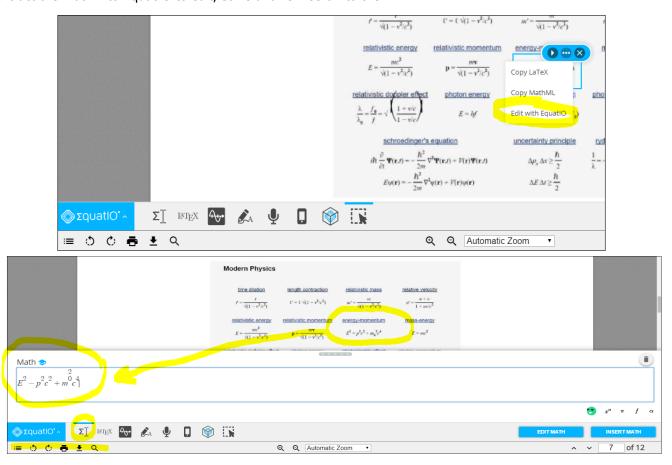




Using EquatIO's Screenshot Reader, you can OCR highlighted math in PDFs to have it read aloud.



Or extract the math into EquatIO to edit, solve and re-insert into the PDF...



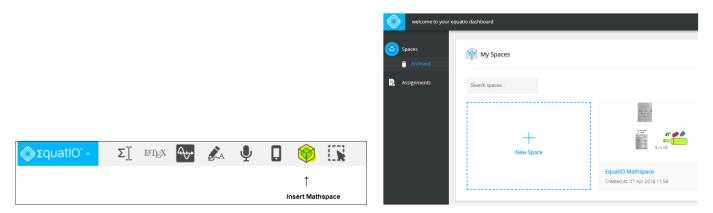
EquatIO mathspace is a super-smart collaborative workspace for your Chrome browser that enables you and your students to collaborate, bringing mathematics to life for the whole class. EquatIO mathspace demo <u>video</u> (this is a good video)

- Our <u>November-2018 blog</u> highlights the latest enhancements to EquatIO mathspace and builds on the updates from our <u>February-2018 blog</u>. Please spend a few minutes reviewing both blogs to better understand the advanced functionality mathspace can offer you.
- Just like EquatIO, mathspace makes it easy to type, write or speak to create equations, formulas and other math expressions. You can add handwritten notes, geometric shapes, manipulatives, icons and scribbles to truly explore math like never before. Then click to share your EquatIO mathspace with students or colleagues.

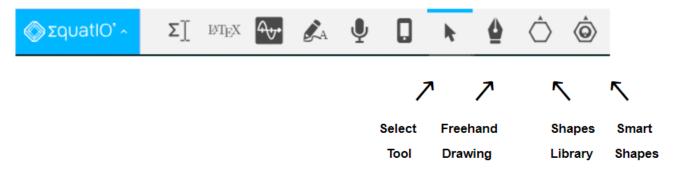




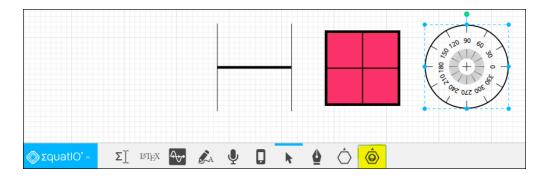
To open a new EquatIO Mathspace, just click the toolbar icon highlighted below, or visit equat.io...



Notice the EquatIO Mathspace toolbar includes additional icons. They include...



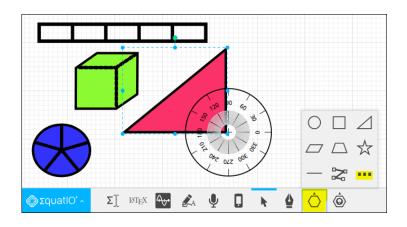
Clicking the Smart Shapes icon lets you add a Number Line, Grid and Protractor as shown below...

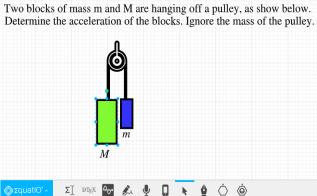


Clicking the Shapes icon gives you access to a library of more than 70 shapes...





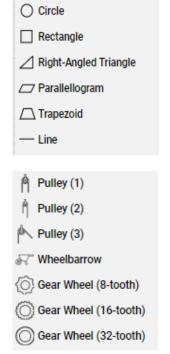




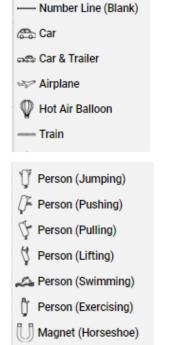


Quick summary of the 70+ options...

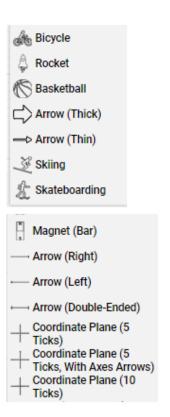
Find shape.







Number Line







Coordinate Plane (10 Ticks, With Axes Arrows)	Fraction Bar (7 Segments)	Fraction Circle (4 Sectors)
Fraction Bar (1 Segment)	Fraction Bar (8 Segments)	Fraction Circle (5 Sectors)
Fraction Bar (2 Segments)	Fraction Bar (9 Segments)	Fraction Circle (6 Sectors)
Fraction Bar (3 Segments)	Fraction Bar (10 Segments)	Fraction Circle (8 Sectors)
Fraction Bar (4 Segments)	Fraction Circle (1 Sector)	Fraction Circle (10 Sectors)
Fraction Bar (5 Segments)	Fraction Circle (2 Sectors)	Fraction Circle (12 Sectors)
Fraction Bar (6 Segments)	Fraction Circle (3 Sectors)	Parallel Lines with Transversal

Additional mathspace resources you may find useful...

- EquatIO mathspace dashboard video
- EquatIO mathspace: How to Use Shapes and Manipulatives video
- EquatIO mathspace: Assignments & Teacher Feedback video
- <u>5 Ways to Use EquatIO mathspace</u> EdTechTeam

Focus Area	Description	EquatIO mathspace URL
Elementary	What numbers are divisors of 12 (includes counting discs)	https://equat.io/kene-b4j7
Elementary	Tangram template	https://equat.io/sk9h-27u3
Elementary	Open Middle Problem Top 10 problems #3 Dot counting	https://equat.io/kbh9-7bga
Elementary	Open Middle Problem Top 10 problems #5	https://equat.io/m72d-d53d
Elementary	Elementary handwriting examples	https://equat.io/m3t5-tact
Elementary	Handwriting Long Division	https://equat.io/j36u-pr6p
Elementary (with scaffolding)	Using the counting discs, show that 12 is divisible by 3.	https://equat.io/ree9-uxce

Focus Area	Description	EquatIO mathspace URL
Middle School	Open Middle Problem Top 10 problems #1	https://equat.io/u47m-wr6v
Middle School	Open Middle Problem Top 10 problems #2	https://equat.io/gh76-h6g6
Middle School	Open Middle Problem Top 10 problems #2 for 5th grade	https://equat.io/b6db-ccyw
Middle/High school	Visual Patterns #1matchsticks template of shapes only	<u>https://e</u> quat.io/ykcc-6s36
Middle/High school	Visual Patterns #1matchsticks with directions for 143rd step	https://equat.io/gc8t-6edt
Middle/High school	Visual Patterns #1matchsticks with directions for creating 3rd step	https://equat.io/k3pp-2jux
Middle/High school	Four color game!!	https://equat.io/zehg-sgy9
Middle/High school	Visual Patterns #2 Cubes Shapes only	https://equat.io/5e2u-yuk9
Middle/High school	Visual Patterns #2 Cubes with directions	https://equat.io/sp9y-3ffa
Middle/High school	Visual Patterns #3 Squares only	https://equat.io/arj3-cwgz
Middle/High school	Open Middle Problem Top 10 problems #4	https://equat.io/yjmw-p7v4
Middle/High school	Open Middle Problem Top 10 problems #7	https://equat.io/8x57-fbtp
Middle/High school	Yohaku for factors	https://equat.io/6j8b-hc8f
Middle/High school	Slope of a Line exploration with Desmos	https://equat.io/e2ps-w4a8





Middle/High school	Plot points and find line of best fit	https://equat.io/7g22-4bwn
Middle/High school	Froot Loops pattern (copy and expect student response option)	https://equat.io/nbju-u48b
Middle/High school	Froot Loops pattern (copy only option)	https://equat.io/8m7s-rsy7
High School	Stoichiometry example (Chemistry)	https://equat.io/3j5c-ngmw
High School	Parallel lines with transversal and label angles	https://equat.io/mpjr-2tya
High School	Proof by induction problem, multiple of 64	https://equat.io/kd8c-7w82
High School	Proof by induction problem, show 9^k-1 is multiple of 8.	https://equat.io/dgkh-ghk2

Hungry for more, please visit the <u>Texthelp YouTube channel for EquatIO</u> to access additional videos. This <u>link</u> explains how Read&Write will read EquatIO math aloud.

We are always happy to answer your EquatIO questions, so please contact us as needed.

Thanks,

Stacey Banks & Heather Weaver

P-CCS Assistive & Instructional Technology

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For EquatIO technical support, please call 888-248-2479 or email support@texthelp.com