

Making Accessibility Accessible

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PSCCMATH.github.io



www.quizizz.com



Click Join a Game (upper right)

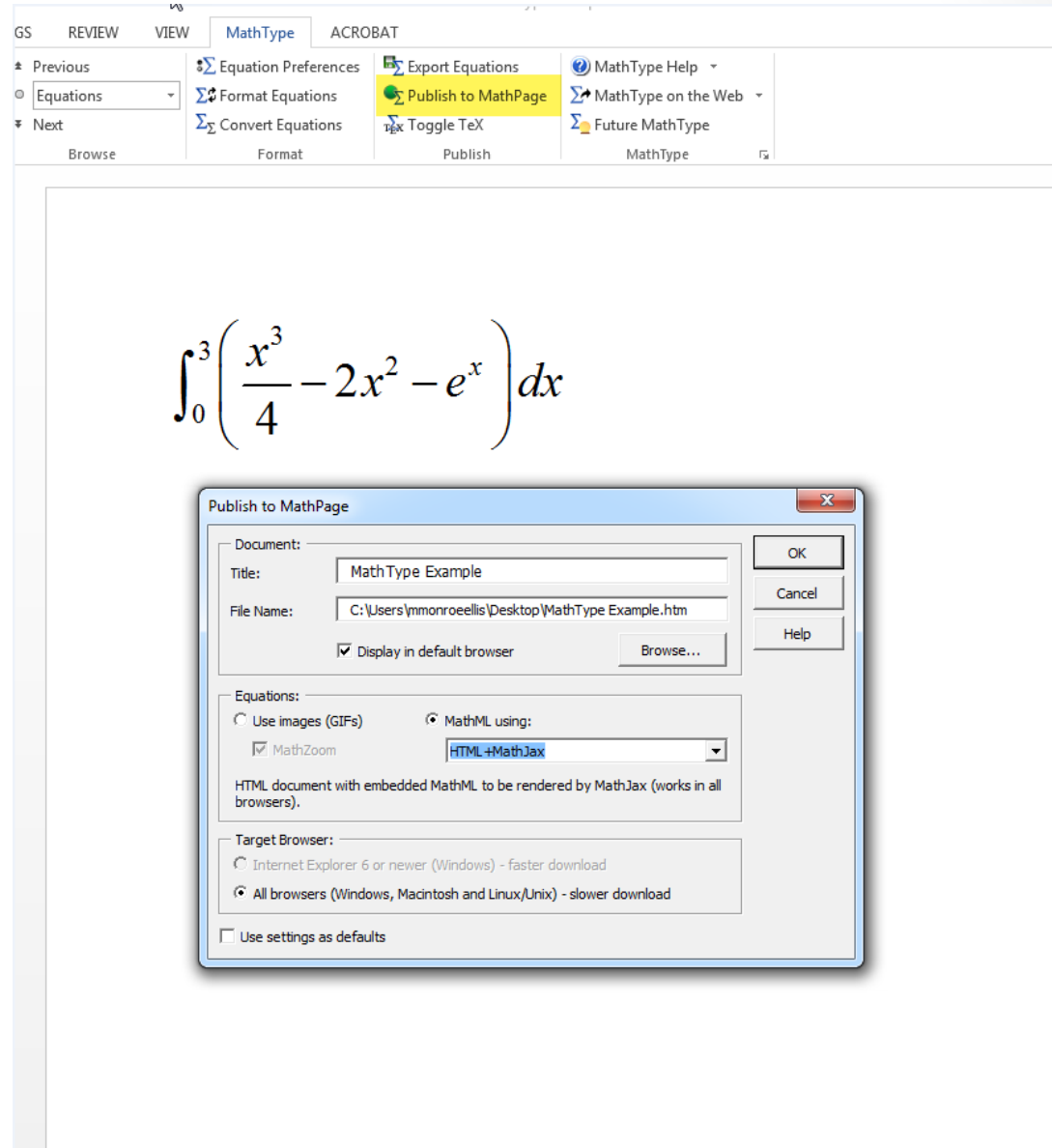
Enter the code

We Want to Use Word

- We have hundreds of well-crafted Word documents.
- We have spent hours and hours typing equations in MathType.
- Our graphs are beautiful and have alternate text.
- Our documents look exactly the way we want them to.

Word & MathType

- Download NVDA
- *MathPlayer works best on IE
- Publish a Word Document to HTML
 1. Open Word Document
 2. Convert Equations
 3. Publish to MathPage
 4. Create a zip folder for HTML output
 5. Move HTML file and folder into zip folder
 6. Upload zip folder into D2L Brightspace
 7. Unzip the folder in Manage Files
 8. Add to Course Content
- For each edit, you must repeat steps 1-8.



We Tried EVERYTHING to Keep Using Word

- Word Equation editor—save as Daisy
- MathType
 - Convert the equations
 - Publish to MathPage
 - Wouldn't always read the equation correctly
 - Our graphs disappeared
 - Students have to download the Word document and MathPlayer

If the Word equation editor and MathType won't do what we want, what do we do?

Our Journey Through the 5 Stages of Grieving

- **Denial** – *Our Word documents look really nice.*
- **Anger** – *We have over 250 pages of material to make accessible.*
- **Bargaining** – *Hey! MathType in Word will publish to HTML. Problem solved!*
- **Depression** – *Why did MathPlayer not read that equation....how many steps does it take to fix one typo...and where in the hell are my graphs?*
- **Acceptance** – *Using Markdown to create HTML documents gives us a truly accessible course. It can be navigated with JAWS. And we've found our graphs!!!*

Final Destination

Through our journey we have discovered that (for us), creating an HTML document is the easiest way to create an accessible document.

Math in Brightspace (D2L) Editor

Math Formulas

2 cm^2

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$
$$\int_{-3}^4 f(x)$$
$$x^2$$
$$2 \text{ cm}^2$$
$$H_2O \rightarrow P_4K_{10}$$
$$3x^3 + 5x^2 + 2x15 = y$$
$$3x^3 + 5x^2 + 15 = y$$
$$123 \div 3 \quad \lim_{123 \rightarrow \infty}$$
$$y = mx + b$$

Math in Brightspace (D2L) Editor

Math Formulas Select a Document Template ▾

Paragraph ▾ **B** *I* U ▾ ▾ Font Face ▾ Size ▾ ▾ Σ ▾

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abc </>

The Good News Is...

Although you will be creating HTML documents, you don't have to be a coder to make your documents beautiful.

(and you don't have to learn any code at all if you don't want customized formatting)

Word to Markdown

Markdown is a text-to-HTML conversion tool.

Markdown allows you to write using an easy-to-read, easy-to-write plain text format, then converts it to structurally valid XHTML (or HTML).

daringfireball.net

MarkDown vs. HTML Editor

- **HTML documents created using Markdown**
 - Easy work flow that can begin with your existing Word documents.
 - We do forfeit some ability to customize our documents.
- **HTML documents created/edited directly in an HTML editor**
 - More robust than Markdown – document can be fully customized.
 - BUT you have to know how to code HTML.

StackEdit

- There are many different markdown editors.
- We chose StackEdit because:
 - It is free.
 - It converts LaTeX formulas to HTML and MathML formulas which use the MathJax javascript library.
 - HTML can be typed directly into it.

$$\int_0^3 \left(\frac{x^3}{4} - 2x^2 - e^x \right) dx$$



Why Not Use Images of Equations with Alternate Text?

Images are visible and pretty on the screen and in print, BUT they require the instructor to provide adequate alternate text.

In essence you create each equation twice.



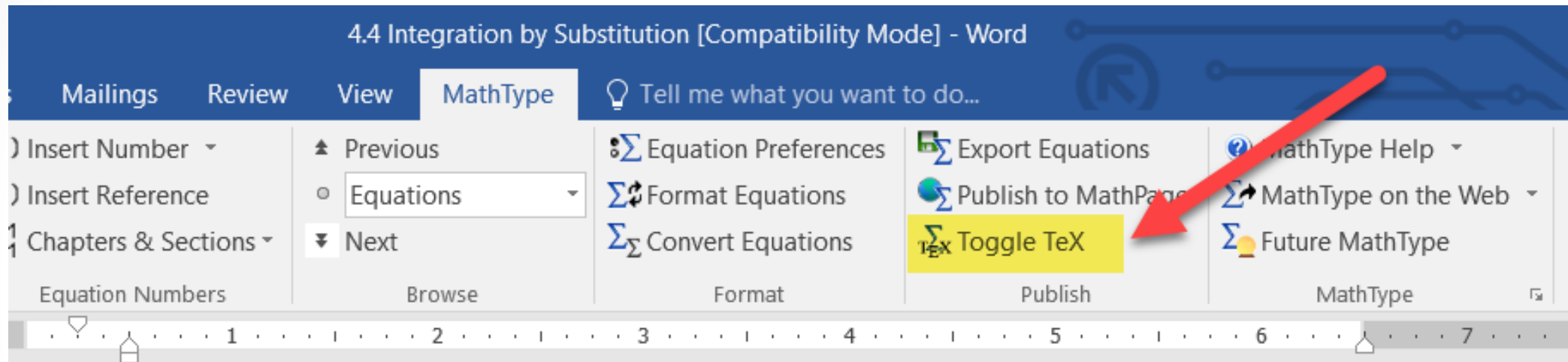
Google Search I'm Feeling Lucky

 Early voting begins in Tennessee today

Converting Word Document to Markdown

1. Copy your Word doc and paste into StackEdit.
2. Edit using
 - The ribbon in StackEdit
 - Wiris
 - The HTML Table Generator
 - HTML code
3. Publish as an HTML document.

Converting Equations from MathType



2. $\int (6x^3 - 7)^{-6} (18x^2) dx$

MathType vs. Wiris

MathType:

```

$$\int \left( 6x^3 - 7 \right)^{-6} \sim \left( 18x^2 \right) dx$$

```

Wiris:

```

$$\int \left( 6x^3 - 7 \right)^{-6} \left( 18x^2 \right) dx$$

```

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PSCC Math

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Applied Calculus

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Copy Code

StackEdit 

Tables Generator

A free, easy-to-use online HTML table generator to quickly create tables.

Table Generator 

Wiris

WIRIS is a set of proprietary HTML-based Javascript tools which can author and edit mathematical formulas, execute mathematical problems, and show mathematical graphics on the Cartesian coordinate system. WIRIS equation editor is a native browser application, with a light server-side, that supports both MathML and LaTeX

Wiris 

Zip File to Download

Contains the css file, the images folder, and the Word document we are converting to Markdown.

- Download the zip file.
- Go to your downloads folder
- Open the zip file
- Click "extract all" button

Access Markdown Zip File 

Presentations

The video is a high-speed screen recording of the steps to writing a markdown document and exporting to HTML. Pause the video at any point to more clearly see the steps.

Powerpoints from various presentations are below in PDF format.

Video 

AMATYC 2016 

Inservice 2016 