Adding Math Using the Equation Editor

The Equation Editor is available within the HTML Editor. It enables users to insert mathematical and statistical equations into their content in the Brightspace platform. It supports the input of MathML and LaTeX, as well as a graphical editor where you can visually create equations.

There is a variety of options for adding math within the Brightspace system and many places this can be added such as quizzes, news postings, discussions, etc., anywhere where the HTML Editor appears. Knowing the options will help you plan for developing math and statistical equations.

There are 3 popular ways to add math in D2L's products:

- Brightspace's Graphical Editor
- LaTeX
- MathML

Graphical Editor

The Graphical Editor features a toolbar equipped with a selection of buttons. This toolbar provides the necessary elements to construct your equations quickly and easily. Each button in the Equation Editor toolbar opens a palette of related mathematical symbols. This editor is the most visual of the three options and it is best suited for those that only write equations occasionally.

It is recommended that you start building the structure of your equation before entering specific numbers and inline notation in each section of the equation.

While this is a nice editor for visually constructing equations, it isn't great for all users since the toolbar is not keyboard accessible.

LaTeX

LaTeX is a typesetting system based on TeX. Although there's a bit of a learning curve, it's compact and efficient once you're familiar with the commands. Advanced users find that this is the fastest input type.

There are two possible modes for LaTeX entry: text mode and math mode. MathJax supports math mode only. If you add LaTeX using the Equation Editor, allow for the following differences in math mode:

Most spaces and line breaks are not recognized and have to be specified with special commands such as \quad.

Empty lines are ignored, only one paragraph per formula.

Each letter is considered to be the name of a variable and will be typeset as such. If you want normal text within a formula (normal upright font and normal spacing) then you have to enter the text using dedicated commands.

MathML

MathML is a standard adopted by the World Wide Web Consortium (W3C). It uses XML to describe mathematical notation by capturing both its structure and content. This enables MathML to support the visual display and assistive technology access.

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Its appearance is similar in structure to HTML. Unlike HTML, MathML is not designed to be hand-written. It is recommended that you compose equations in a visual editor and paste its MathML output into the Brightspace Equation Editor.

Accessing the Equation Editor

In the HTML editor, click the dropdown next to the Epsilon symbol and select a format.
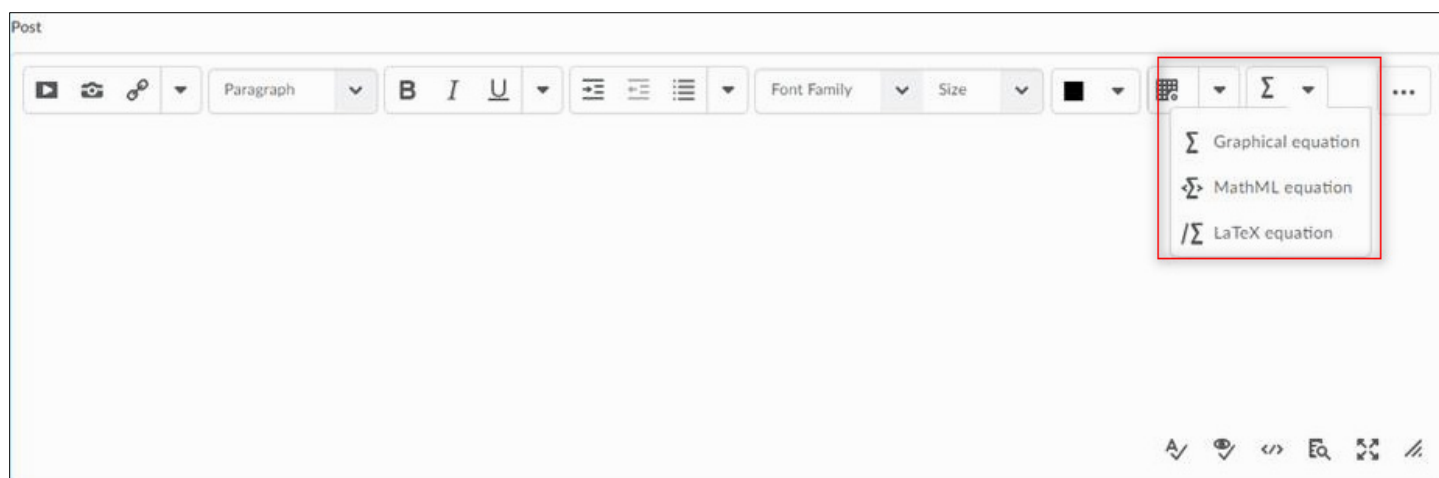
Tabs in the Graphical Equation Editor

| Icon	Name	Description
√□ □/□	General tab	• Add a template for building equations. • Add and edit text in the equation using the Cut, Copy, Paste, Undo, Color, and other text editing function
∈ ∞	Symbols tab	Add mathematical symbols to equations
→ ∴	Arrows tab	Update or add arrows to equations
α Ω	Greek and letters tab	Update or add uppercase and lowercase Greek characters to equations
[□□] {□	Matrices tab	Update or add matrices to equations
□□ □/□	Scripts and layout tab	Add scripts or layouts to build equations
(□) □̂	Decorations tab	Add fences such as brackets and vertical bars around text fields
Σ ∪	Big operators tab	Update or add big operators to equations
∫□□ lim	Calculus tab	Add a template for building Calculus equations

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# Keyboard shortcuts available in the Graphical Equation Editor

- Use **Ctrl + f** to create a fraction.
- Use **Ctrl + 9** to add round brackets.
- Use **Ctrl + h** to create superscript.
- Use **Ctrl + j** to create subscript.
- Use **Ctrl + z** to undo your last action.
- Use **Ctrl + i** to create an integral.
- Use **Ctrl + >** to enlarge text and **Ctrl + <** to shrink text.

Create an Equation

1. Navigate to the HTML Editor where you want to create an equation.
2. From the **Graphical equation** drop-down list, do one of the following:
   - To insert a graphical equation, click **Graphical equation**.
   - To insert a MathML equation, click **MathML equation**.
   - To insert a LaTeX equation, click **LaTeX equation**.
3. In the **Insert Equation** window, enter your equation.
4. Click **Insert**.

Note: You may need to click on the Show all components icon to see the Equation Editor icon.

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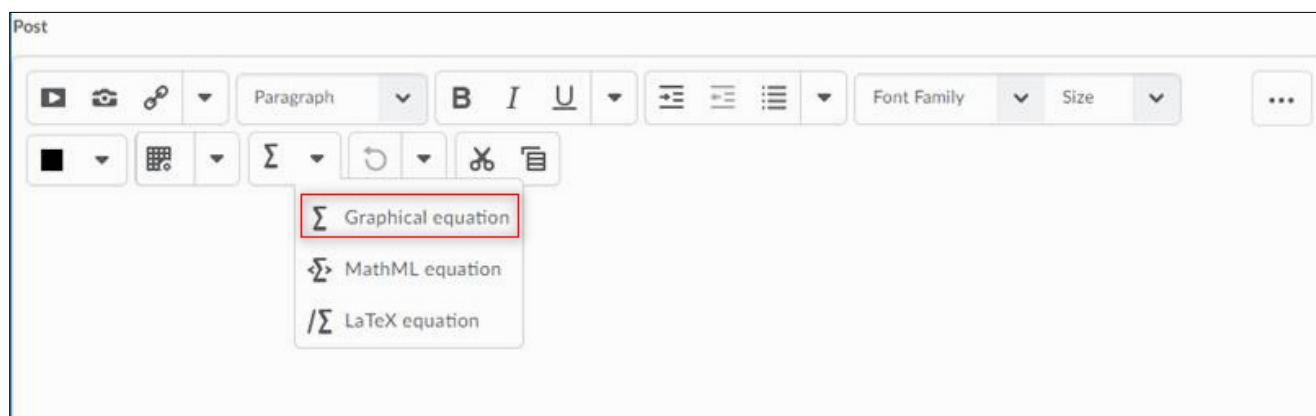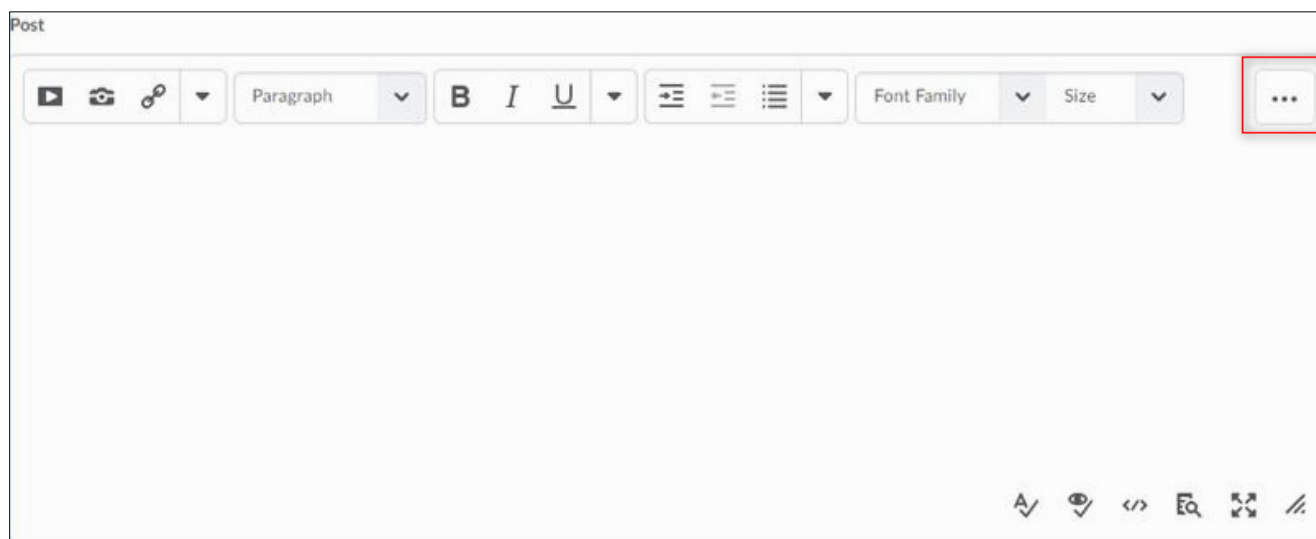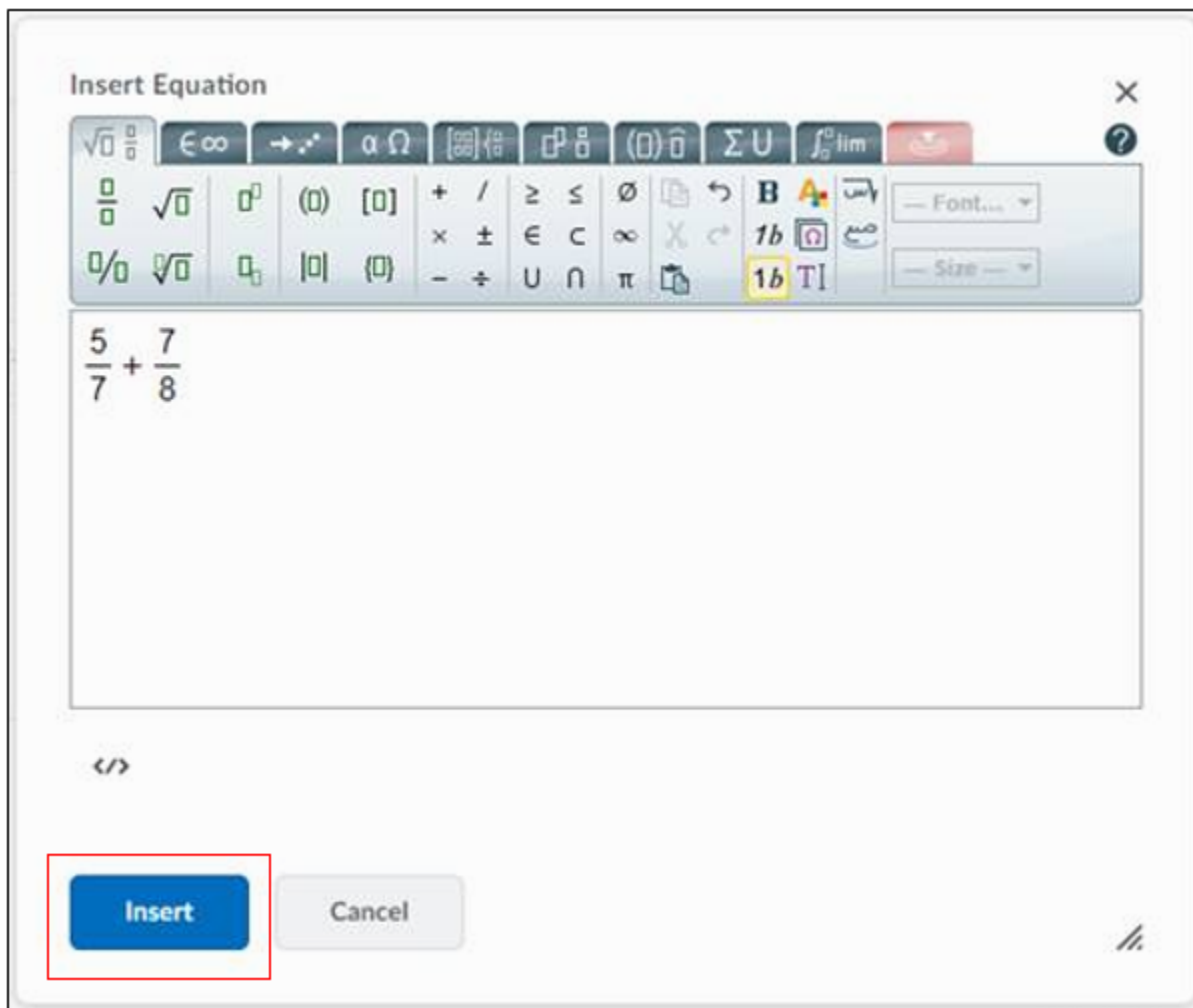
An example of a graphical equation