

CO^WTCH_OOX math system

This document will describe hwo the math system works.

Crate a math environnement

There are two ways to do that:

- Use dollars for inline math: `$This is math$`
- Use double dollars for a big, centered block of math: `$$This is math$$`

These tag will be converted into `<mathnode>` tags, with double-dollar maths having the `center` class.

Basic usage

Inside math, comments, HTML tags and everything else is still supported. All spaces in math are not displayed, you can add them manually by escaping them: `\` (yes there is a space after the backslash).

In math you can use **math operators**. The syntax is:

```
?operator_name {first argument} {second argument} ...
```

For instance, `?frac{1}{2}` gives $\frac{1}{2}$. If an argument is only one objet, you can omit the braces: `?frac 1 2`

Some operators have an **alias**. It allow them to be called in a shorted way. For instance, to show \in , you can use `?belongsto` or it's alias `€`. Aliases takes arguments exactly in the same way.

Some aliases are **infix**. That means they have two arguments, and that the first should be placed *before* the alias. Here for a fraction: `1 / 2` or an exponent: `2 ^ n`.

You can add braces (`{ }`) to group things. (It will create additional `<div>`s)

Greek letters

You can use greek letters in math. To do that, use `§`, followed by the equivalent letter. For uppercase, use an uppercave letter. For example, `§d` gives δ , and `§D` gives Δ .

§a	α	§b	β
§c	ψ	§d	δ
§e	ε	§f	φ
§g	γ	§h	η
§i	ι	§j	ξ
§k	κ	§l	λ
§m	μ	§n	ν

<code>\o</code>	o		<code>\p</code>	π
<code>\r</code>	ϱ		<code>\s</code>	σ
<code>\t</code>	τ		<code>\u</code>	ϑ
<code>\v</code>	ω		<code>\x</code>	χ
<code>\y</code>	v		<code>\z</code>	ζ

Table 1: List of greek letters

Parentheses

Parentheses will match the height of the inner content.

Source	Result
<code>(1/2)</code>	$\left(\frac{1}{2}\right)$
<code>[1/2]</code>	$\left[\frac{1}{2}\right]$
<code>\{1/2\}</code>	$\left\{\frac{1}{2}\right\}$

Table 1: Parentheses

Be careful, because sometimes you would have to write something like $\left[\frac{1}{2}, \frac{2}{3}\right]$. You will have to tell the compiler that the first bracket should match with the one after (and not with a bracket before!). You can do that by putting an exclamation mark before the bracket: `!1/2, 2/3]`
`\{` can match with `}`, this is useful to make systems.