

# MathJax

"MathJax is a cross-browser JavaScript library that displays mathematical equations in web browsers, using LaTeX math and MathML markup. MathJax is released as open-source software under the Apache license."

Source: <http://en.wikipedia.org/wiki/MathJax>

## Tiki20+

Native support was added via <https://sourceforge.net/p/tikiwiki/code/68624> and should appear here: <https://packages.tiki.org/>

## Before Tiki 20

Add the following line to tiki-admin.php -> Look and Feel -> Custom HTML <head> Content:

### To include in all pages

```
<script type="text/javascript"
src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS-MML_HTMLorMML"> </script>
```

### To include only in one page (choose your own page name)

```
{if $page eq 'MathJax'} <script type="text/javascript"
src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS-MML_HTMLorMML"> </script> {/if}
```

The other possibility (working in http and https) is to install (copy) the MathJax locally

as described at: <http://docs.mathjax.org/en/latest/installation.html>

for example to ".add\_mathjax" directory

and add to tiki-admin.php -> Look and Feel -> Custom HTML <head> Content:

### For local instalation

```
<script type="text/javascript" src="./add_mathjax/MathJax.js?config=TeX-AMS-MML_HTMLorMML"> </script>
```

Then, just use math in your page using [PluginHTML](#). It will sometimes work without that but there can be conflicts with wiki syntax or other code. Click [here](#) to see the source of the current wiki page for an example.

**Nice presentation won't load just after you save a page. So after saving, go to another page, and click back to your page**

Below are math samples copied from <http://www.mathjax.org/demos/tex-samples/>. Right-click on the formulae for more options.

## The Lorenz Equations

$$\begin{aligned} \dot{x} &= \sigma(y-x) \\ \dot{y} &= \rho x - y - xz \\ \dot{z} &= -\beta z + xy \end{aligned}$$

## The Cauchy-Schwarz Inequality

$$\left| \sum_{k=1}^n a_k b_k \right|^2 \leq \left( \sum_{k=1}^n a_k^2 \right) \left( \sum_{k=1}^n b_k^2 \right)$$

## A Cross Product Formula

$$\mathbf{V}_1 \times \mathbf{V}_2 = \begin{vmatrix} \mathbf{i} & \mathbf{j} & \mathbf{k} \\ \frac{\partial X}{\partial u} & \frac{\partial X}{\partial v} & 0 \\ \frac{\partial Y}{\partial u} & \frac{\partial Y}{\partial v} & 0 \end{vmatrix}$$

## The probability of getting $k$ heads when flipping $n$ coins is

$$P(E) = \binom{n}{k} p^k (1-p)^{n-k}$$

## An Identity of Ramanujan

$$\frac{1}{\text{Bigl}(\sqrt{\phi \sqrt{5}} - \phi \text{Bigr)} e^{\frac{25}{\pi}}} = 1 + \frac{e^{-2\pi}}{1 + \frac{e^{-4\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-8\pi}}{1 + \dots}}}}$$

## A Rogers-Ramanujan Identity

$$1 + \frac{q^2}{(1-q)} + \frac{q^6}{(1-q)(1-q^2)} + \dots = \prod_{j=0}^{\infty} \frac{1}{(1-q^{5j+2})(1-q^{5j+3})},$$

\quad \text{for } |q| < 1.

## Maxwell's Equations

$$\begin{aligned} \nabla \times \mathbf{B} - \frac{1}{c} \frac{\partial \mathbf{E}}{\partial t} &= \frac{4\pi}{c} \mathbf{j} \\ \nabla \cdot \mathbf{E} &= 4\pi \rho \\ \nabla \times \mathbf{E} &= -\frac{1}{c} \frac{\partial \mathbf{B}}{\partial t} \\ \nabla \cdot \mathbf{B} &= 0 \end{aligned}$$

## Related links

- <https://groups.google.com/forum/?fromgroups=#!topic/mathjax-users/-AP8s7AVpLo>