

Test Article: Math, Images, and Citations

A full workflow demo

Alistair Bhatti

2026-08-08

1 Basic mathematics

Inline math sits in a line of prose: the Pythagorean theorem states $a^2 + b^2 = c^2$, and Euler's identity $e^{i\pi} + 1 = 0$ is often called the most beautiful equation in mathematics.

A simple display equation — the quadratic formula:

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

2 More complicated mathematics

A multi-line derivation using an aligned block:

$$\begin{aligned}\nabla \cdot \mathbf{E} &= \frac{\rho}{\varepsilon_0} \\ \nabla \cdot \mathbf{B} &= 0 \\ \nabla \times \mathbf{E} &= -\frac{\partial \mathbf{B}}{\partial t} \\ \nabla \times \mathbf{B} &= \mu_0 \mathbf{J} + \mu_0 \varepsilon_0 \frac{\partial \mathbf{E}}{\partial t}\end{aligned}$$

A matrix, an integral, and an infinite series in one line of display math:

$$\mathbf{A} = \begin{pmatrix} a & b \\ c & d \end{pmatrix}, \quad \int_{-\infty}^{\infty} e^{-x^2} dx = \sqrt{\pi}, \quad \sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}.$$

The time-dependent Schrödinger equation, for good measure:

$$i\hbar \frac{\partial}{\partial t} \Psi(\mathbf{r}, t) = \left[-\frac{\hbar^2}{2m} \nabla^2 + V(\mathbf{r}, t) \right] \Psi(\mathbf{r}, t)$$

3 A figure

Static images live in `img/` and are referenced with a relative path; the build step copies them into the site assets folder and rewrites the link.

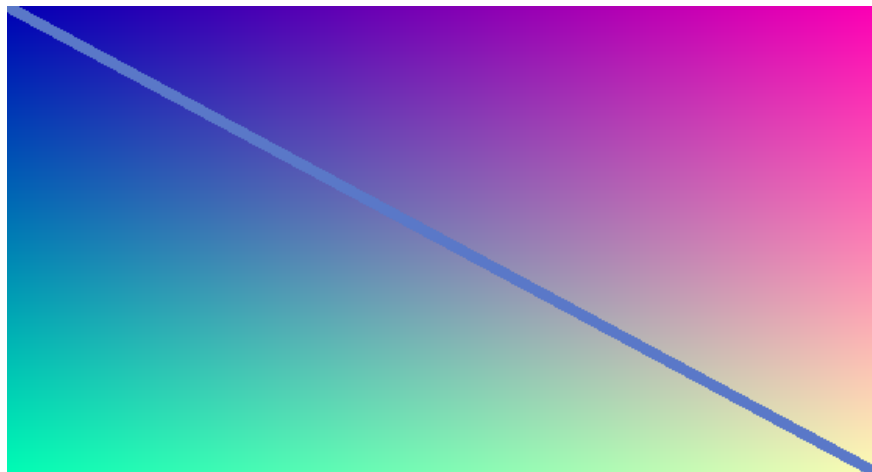


Figure 1: A placeholder figure used to demonstrate image handling.

4 Discussion

Special relativity reshaped our notion of space and time (Einstein 1905), and careful typesetting has long been treated as part of doing mathematics well (Knuth 1984). Both references appear in the list below.

5 References

- Einstein, Albert. 1905. “Zur Elektrodynamik Bewegter körper.” *Annalen Der Physik* 322 (10): 891–921. <https://doi.org/10.1002/andp.19053221004>.
- Knuth, Donald E. 1984. “Literate Programming.” *The Computer Journal* 27 (2): 97–111. <https://doi.org/10.1093/comjnl/27.2.97>.