

Maxwell's Equations

Theory of Everything Mathematical Formulas

Introduction

This document contains mathematical formulas extracted from the Theory of Everything documentation. The formulas are rendered using LaTeX to ensure proper mathematical notation and readability. Each formula is presented with its name, the equation itself, and a brief description of its significance.

Maxwell's Equations

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$$\begin{aligned} \nabla \cdot \vec{E} &= \frac{\rho}{\epsilon_0} \quad \nabla \cdot \vec{B} = 0 \quad \nabla \times \vec{E} = -\frac{\partial \vec{B}}{\partial t} \quad \nabla \times \vec{B} = \mu_0 \vec{J} + \mu_0 \epsilon_0 \frac{\partial \vec{E}}{\partial t} \end{aligned}$$

Maxwell's equations describe how electric and magnetic fields are generated by charges, currents, and changes of each other.

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