Examples of LaTeX Mathematical Expressions

Fractions

 $\frac{a}{b}$

Powers

 x^n

Partial Derivatives

 $\frac{\partial f}{\partial x}$

Integrals

$$\int_{a}^{b} f(x) dx$$

$$\oint_{\partial S} \mathbf{F} \cdot d\mathbf{r} = \iint_{S} (\nabla \times \mathbf{F}) \cdot d\mathbf{S}$$

$$\iint_{S} (\nabla \times \mathbf{F}) \cdot d\mathbf{S} = \oint_{\partial S} \mathbf{F} \cdot d\mathbf{r}$$

$$\oint_{\partial V} \mathbf{E} \cdot d\mathbf{A} = \frac{1}{\epsilon_{0}} \iiint_{V} \rho \, dV$$