# LaTeX Matemáticas en el Documento (2)

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## Dentro del Texto

$ ... $

## Fuera del Texto

* Sin numeración → $$ ... $$
* Con numeración:

```
\begin{equation}
...
\end{equation}
```

## Ecuaciones Alineadas

$$y = \alpha + x + 2 = 2 + \alpha + x \quad (1)$$

```
\begin{align}
    y &= \alpha + x + 2 \nonumber \\
      &= 2 + \alpha + x
\end{align}
```

## Ejemplos

$\alpha + \beta = \gamma$ → `\alpha + \beta = \gamma`

$ax^2 + bx + c = 0$ → `ax^2 + bx + c = 0`

$\varepsilon_0 = -\vec{\mu} \times \vec{B}$ → `\epsilon_0 = -\vec{\mu} \times \vec{B}`

$\left( \frac{1}{x+2} \right)^3$ → `\left( \frac{1}{x+2} \right)^3`

$\lim_{x \to 0} (x + \sqrt[3]{z})$ → `\lim_{x \to 0} (x + \sqrt[3]{z})`

$\Gamma(z) = \int_0^\infty t^{z-1} e^{-t}\, dt$ → `\Gamma(z) = \int_0^\infty t^{z-1} e^{-t}\, dt`

$\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi}{6}$ → `\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi}{6}`

$$f(x) = \begin{cases} x^2 & \text{para } x \geq 0 \\ 2x & \text{para } x < 0 \end{cases}$$

```
f(x) =
\begin{cases}
    x^2 & \text{para } x \geq 0 \\
    2x  & \text{para } x < 0
\end{cases}
```

## Matrices

$$\begin{pmatrix} a & b \\ c & d \end{pmatrix}$$

```
\begin{pmatrix}
a & b \\
c & d
\end{pmatrix}
```