Math equations using LaTeX

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Introduction

Let's begin with a formula:

$$e^{i\pi} + 1 = 0.$$

- But we can also do,

$$e = \lim_{n\to\infty} \left(1 + \frac{1}{n}\right)^n = \lim_{n\to\infty} \frac{n}{\sqrt[n]{n!}}$$

- We can do another:

$$e = \sum_{n=0}^{\infty} \frac{1}{n!}$$

- We can also use continued fractions:

$$e = 2 + \cfrac{1}{1 + \cfrac{1}{2 + \cfrac{2}{3 + \cfrac{3}{4 + \ddots}}}}$$

More formulas

1. Definite integral:

$$\int_a^b f(x)dx$$

2. Triple integral:

$$\iiint f(x, y, z)dxdydz$$

3. Vector:

$$\vec{v} =< v_1.v_2, v_3 >$$

4. Dot product:

$$\vec{v} \cdot \vec{w}$$

5. Matrix:

$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix}$$