## Hello latex!

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## introduction

Let's begin with a formula  $e^{i\pi} + 1 = 0$ .

 $\bullet\,$  But we can also do

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

• We can do another:

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

• We can also use continued fractions

$$e = 2 + \frac{1}{1 + \frac{\frac{1}{2 + \frac{1}{3 + \frac{2}{3 + \frac{3}{4 + \frac{3}{4 + \dots}}}}}}}{\frac{5+}{1 + \frac{3}{4 + \frac{3}{4 + \dots}}}}$$

## 1 More formulas

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

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

$$\vec{v} = \langle v_{1}, v_{2}, v_{3} \rangle$$

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

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