Reimann - Zeta Function

$$\zeta(s) = \sum_{n=1}^{\infty} \frac{1}{n^s} \tag{1}$$

u need to know about complex exponentiation, some calculus etc.

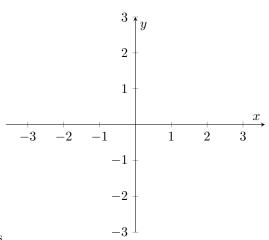
Complex exponentiation,

$$e^{i\pi} = -1 \tag{2}$$

This is the Euler's Identity,

let's make it more general,

$$e^{i^{\pi}} = \cos(x) + i\cos(y) \tag{3}$$



now lets understand what it truly means