# Integral

9 Octobre, 2023

#### Lucas Duchet-Annez

## The Integral (AntiDerivative)

### Definition

Theorem:

If F a antiderivative of f then F+C is the most general antiderivative

Ex:

$$f(x) = \cos(x)$$

$$F(x) = sinx + c$$

Ex:

$$f(x) = x^n, n \neq -1$$

Power Chain Rule:  

$$F = \frac{x^{n+1}}{n+1} + C$$
Ex:

$$n=-1: f(x) = \frac{1}{x}$$

$$n=-1: f(x) = \frac{1}{x}$$

$$F(x) = \ln|x| + c$$

#### Links

- <u>Identities</u>
- <u>Techniques</u>
- Nice Exercices
- Maths