



the fundamental themes of ethics, part 1







indefinite integrals

# the fundamental theorem of calculus, part 1

Part 1 is based on **indefinite integrals**

If  $f(x)$  is continuous on an interval, and we define a function:

$$F(x) = \int_a^x f(t) dt,$$

then  $F'(x) = f(x)$ .

- The derivative of the indefinite integral recovers the original function
- Working with indefinite integrals:
  - The answer should be a function + a constant of integration  $C$
  - This expression represents all the possible antiderivatives of  $f(x)$

# the fundamental theorem of calculus, part 2

Part 2 is based on **definite integrals**