

# Class 22: More Substitutions

## Calculus II

College of the Atlantic. Feb 27, 2023

Find the following anti-derivatives:

$$\int e^{-10t} dt \quad (1)$$

$$\int \frac{x^2}{1+3x^3} dx \quad (2)$$

$$\int \frac{x^2}{x+3x^3} dx \quad (3)$$

$$\int \frac{1}{2x} dx \quad (4)$$

Do integral (4) two ways: 1) using a substitution and 2) pulling the 1/2 out front.

Evaluate the following definite integrals:

$$\int_0^{\frac{1}{2}} \cos(\pi x) dx \quad (5)$$

$$\int_1^4 \frac{x^2}{1+3x^3} dx \quad (6)$$