

Vocabulary/Definitions

- The antiderivative of $f(x) = 0$
- How many antiderivatives of a function $f(x)$ there are, and how they are related
- The antiderivative of $f(x) = k$
- The antiderivative of $f(x) = x^n$
- The antiderivative of $f(x) = 1/x$
- The antiderivative of $f(x) = e^x$
- The antiderivative of $f(x) = \cos(x)$
- The antiderivative of $f(x) = \sin(x)$

Understand

1. Find the most general antiderivative of $g(x) = 3x - \sin(x)$.

2. Use the Fundamental Theorem of Calculus to find $\int_0^3 3x - \sin(x) dx$ exactly.