

CSCI / MATH 2072U - Assignment 1

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1 Latex Examples

1.1 Fundamental Theorem of Calculus

The Fundamental Theorem of Calculus states that there exists a function $G(x)$ defined by

$$G(x) = \int_a^x g(t)dt$$

such that

$$\frac{d}{dx}G(x) = g(x)$$

The function $G(x)$ is an antiderivative of $g(x)$.

1.2 Equation of a Single Variable

The following equation is an equation of a single variable t

$$\sqrt{t}\sin(t) + e^{2t} = 1$$

1.3 Order Notation

The “big O” notation, such as,

$$\mathcal{O}(N \log N)$$

provides the limiting behavior of a function or the complexity of an algorithm.

1.4 Greek Alphabet

Some letters in the Greek alphabet are alpha α , beta β , gamma γ , delta δ , pi π , xi ξ , epsilon ϵ , and sigma σ .