Mathematical Document

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Abstract

This document presents mathematical results.

1 Introduction

Let $f : \mathbb{R} \to \mathbb{R}$ be a function.

Definition 1. *A function f is continuous if...*

Theorem 1. *For all $x \in \mathbb{R}$, we have:*

$$\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2}$$

Proof. The proof follows from... □

2 Main Results

Consider the equation:

$$\frac{dy}{dx} = f(x, y) \tag{1}$$