## The Art of Spirals

Ethan Huang, Ethan Hwang, Shaurya Guthula, Samuel Zhang May 29, 2024

## Introduction

We were interested in how different spirals with different patterns that have a specific mathematical rule that occurs all throughout nature. We also wanted to challenge ourselves and write a code to animate and visualize each of the different sequences and to include different aspects of the sequences.

## **Table of Contents**

- 1. The Logarithmic Spiral Equation
- 2. The Archimedean Spiral Equation
- Converting Polar Coordinates to Cartesian Coordinates
- 4. Fibonacci Sequence and The Golden Ratio
- 5. Spirals in Real Life

## **Logarithmic Spiral Equation**