Day #8: formal mathematical environments

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1 Introduction

Consider the sequence of numbers

$$1, 1, 2, 3, 5, 8, \ldots$$

called the *Fibonacci Sequence*. We define the Fibonacci Sequence below.

Definition 1 (Fibonacci Sequence)**.** *Starting with the numbers* 1 *and* 1 *new terms of the* Fibonacci Sequence *are found by summing the previous two terms.*

Theorem (Power rule for integrals)**.** *Consider* $f(x) = x^n$ *for integers* $n \neq -1$*. The Power Rule for integrals states,*

$$\int x^n \, dx = \frac{1}{n+1} x^{n+1} + c.$$

Proof. This is left to the reader. □

1.1 Experimentation

What other environments might we want/need?

- examples
- practice questions
- algorithm
- lemma
- corollary
- exercises

Define one of these in preamble, use it in the text, and fill in some content.