Why

We want a simple example of modeling an uncertain outcome.

Model

Consider flipping a coin. The coin has two sides. When we flip the coin, it lands heads or tails.

Let us use the set of outcomes $\{0, 1\}$. If the coin lands tails, we will say that outcome 0 has occurred. If the coin lands heads, we will say that outcome 1 has occurred.

Coins

Probability Outcomes

Cardinality

Probability

Common Sense

Injective Functions

Functions

Relations

Ordered Pairs

Natural Numbers

Unordered Pairs

Empty Set

Set Intersections

Set Unions

Set Specification

Set Inclusion

Set Equality

Sentences

Identity

Sets

Objects