

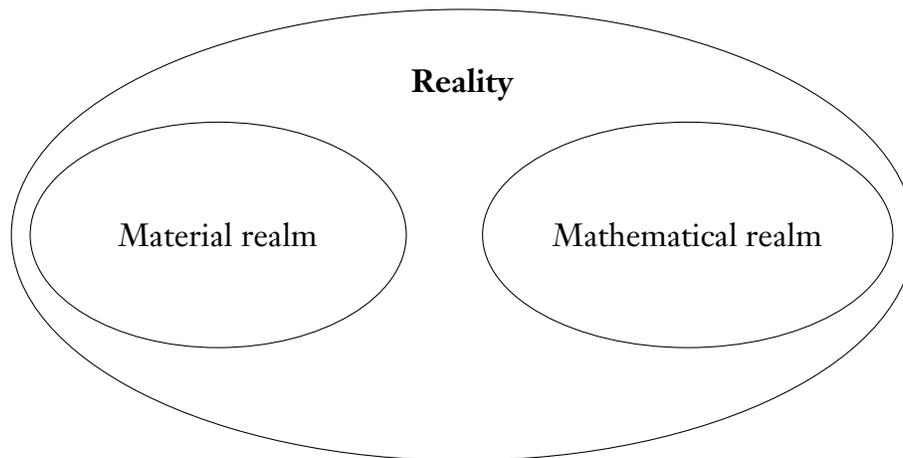
# PLATONISM

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Philosophy of Mathematics

## 1. Metaphysics: an immaterial realm

**Platonism** Mathematics is about a causally isolated realm of eternal, indestructible, unchanging nonphysical, nonspatial objects that exist independently of us.

According to platonism there is more to reality than the material realm; there is in addition the realm of mathematics:



Material objects can be sensed and are subject to change. Mathematical entities are eternal, immutable, and causally and spatially isolated from us.

## 2. The challenge of applied mathematics

How could a causally isolated realm be so useful (e.g., in science)?

## 3. Epistemology: recollection

How can we know about an isolated realm of entities?

Plato's answer: we remember facts about mathematics from past lives. One theistic answer: God creates us with innate mathematical knowledge. Hmm...