

Introduction to Philosophy of Physics Homework 1

Natural motion, inertia, laws, determinism

Due: 10 March 2024

1. Explain in one paragraph the main problem of heliocentrism regarding terrestrial physics. [2 points]
2. Consider John Conway's game of *Life* as it was introduced in class. For both questions, explain your answer.
 - (a) Is the game of *Life* future-deterministic? [1 point]
 - (b) Is the game of *Life* past-deterministic? [1 point]
3. Descartes defended a view committed to what Huggett calls 'spatter'. According to this view, matter is metaphysically prior to space and space really just is (an aspect of) matter. How did Descartes make sense of motion qua change of place? [2 points]
4. Explain how Newton's bucket thought experiment articulates a problem for Descartes's view. [2 points]
5. How is Huggett's analogy with a game of chess on an infinite board supposed to help relationalism against Newton's bucket thought experiment? [2 points]