

Classical mechanics remains the oldest branch of physics. Indeed, it is so old that fundamental concepts of inertia and forces is ingrained in our culture. Despite this not everyone has a solid grasp on what seems to be fundamental or simple, these questions are meant to tax your understanding. Enjoy!

## 1 Classical Mechanics

### 1.1 Does it stop?

Consider ideal conditions<sup>1</sup> in which there is a hard ball rolling without slipping on a floor with friction. This floor is infinite in extent, and there is a gravitational force pulling the ball to the ground at constant magnitude, does the ball ever stop? or does it roll forever?      Credit: Physics Problems to Challenge Understanding

### 1.2 Another Question by Some Ambitious Fellow

Nothing yet!

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<sup>1</sup>No wind resistance, every shape is geometrically perfect to within precision limited by nature.