

Oberlin College Physics 212, Fall 2021

Assignment 7:

What Is Quantum Mechanics About?

Wednesday, 17 November

Fall break is finally here! I recommend that you kick back, relax, and return refreshed to work on ...

Reading: From *Invitation to Quantum Mechanics* read chapter 2 (“What Is Quantum Mechanics About?”).

Problems: Due Wednesday, 1 December. From *Invitation to QM*.

- problem 1.15: *Characteristic quantities*
- *Value of knowing characteristic lengths.* In April 2020 a Twitter user asked “If a fart can make it through underwear and a pair of jeans, how can a mask made of cloth save you from Covid-19?” Use what you already know about characteristic lengths to guess the diameter of a hydrogen sulfide molecule (the odoriferous component of farts) and the diameter of a coronavirus. Search the internet to check your guesses. (By the way, a cloth mask does *not* filter out Covid-19 viruses. It filters out the water droplets that Covid-19 viruses ride from one victim to the next.)
- problem 2.12: *Questions*