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PLEASE SUBMIT YOUR WORK THROUGH GOOGLE CLASSROOM

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1. **NEXT MONDAY, December 18, we will play a TRIVIA GAME based on what we have learned/reviewed so far. You should continue to study for it: this week please review Lectures ##7-11.**

2. The size of an atom is about  $\sim 10^{-10}\text{m}$ . The size of an atomic nucleus is  $\sim 10^{-14}\text{m}$ .  
**What part (by volume) of an atom does its nucleus take?**

Hint: recall the formulae for the volume of a sphere (see Slide #9 of Lecture #5 for help), calculate volumes of nucleus and atom separately, then take a ratio. Alternatively, you may want to write down both volumes as formulae, then take an algebraic ratio, and only after that substitute the numbers in to calculate your answer.

3. (OPTIONAL) While you are preparing for the game, think of another clever question you would like to add! Don't forget to provide a full answer to it 😊

**QUESTION:**

**FULL ANSWER:**

**(Three best questions from the class will be selected and added to the game)**