

NAME:

1. **NEXT SUNDAY, December 17, we will play a TRIVIA GAME based on what we have learned/reviewed so far.**

Please read the game description that was given to you separately.

You should continue to study for it: this week please review Lectures ##7-11.

2. The size of an atom is about $\sim 10^{-10}$ m. The size of an atomic nucleus is $\sim 10^{-14}$ 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.