Reading Questions:

Some Reading Questions are assigned in MasteringPhysics. Others are posted to the course web page like this. Do them before class. Those in MP are graded automatically. Those posted here may appear as clicker questions or quick quiz in class. Many of these questions will, over the semester, form a collection of important definitions and concepts from the course and a useful review tool from that perspective. Others are intended to make you practice in a simple setting ideas discussed in the text as you read it. You might put the answers in your class notes. Answers that are in the form of a complete sentence are more valuable that one or two word answers. (A good answer makes clear what the question was, without a verbatim repetition of the question.) Clear diagrams or graphs are often worth a thousand words.

Week 1 / Chapter 1:

Do the RQ1 in MasteringPhysics before lecture on Thursday, Jan 14.

And finish the rest given here before Friday discussion.

1) The original 1792 establishment of the meter as a unit of distance defined the distance from north pole to the equator along the meridian passing through Paris, France as 10,000,000 meters. So, according to that definition, what’s the circumference of Earth? Given the circumference of a circle is $2\pi r$, then what’s Earth’s radius?

2) What is the conversion factor relating centimeters and inches? How much is a foot when expressed in cm, to two significant figures?

3) Our federal government debt is currently about 19 trillion dollars. If equally divided among all persons in the U.S., what’s your share of the debt to 1 significant figure?

4) What are the two defining characteristics of any vector? What do physicists mean when they talk about the displacement vector?

5) If $\vec{C}$ is a vector, what property of the vector does $C$ (without the arrow) refer to?

6) What’s special about a vector wearing a hat, $\hat{A}$, (instead of an arrow, $\vec{A}$)? What (in words) is $\hat{j}$?