Composition based on number of bodies Name_____

These are the units we will use to relate to the outside world. In other words, put everything you get from reading into these units before bringing them into the simulation units. And vice versa when relating simulation information to the outside world.
Mass in kilograms: kg
Length in kilometers: km
Time in hours: hr

These are the inputs you will need to know to determine your mass, length and time units.
Number of bodies = N
Universal gravitational constant: G = 6.67430×10^{-11} $m^3 \cdot kg^{-1}s^{-2}$
Mass of Ceres: Mc = $9.383 * 10^{20}$ kg
Diameter of Ceres: Dc 940 km
****

What is the density of Ceres, not from the internet but what is given above?

Pc = _____kg/km^3

What is the mass of each of these bodies?

Mb = _____ kg

What is the diameter of each of these bodies?

Db = _____ km

What would be a good mass unit for our simulation?

1.0*SMU = _____ kg

What would be a good length unit for our simulation?

1.0*SLU = _____ km

What time unit would make G be 1 given the simulation mass and length units?
Note: G is not in the correct outside world units

_____ hrs

What would be a good time unit for our simulation?

1.0*STU = _____ hrs