1. How many grams of glucose are in 6.63 x 1023 molecules of glucose, C6H12O6?

2. Determine the number of molecules found in a 12.4 g sample of H2SO4.

3. 3.14 x 1023 molecules of CO2 are produced in a chemical reaction. How much would the sample weigh in grams?

4. How many atoms are in a 39.8 g sample of Fe?

Can I apply this somehow to volume? Well at standard temperature and pressure (STP) a mole of a gas will occupy 22.4 liters. So If we keep our units straight we should be able calculate a given volume of gas from moles. Check it out…… <http://www.sciencegeek.net/Chemistry/Video/Unit4/GMV4.shtml>

1. Convert 427 Liters of CO2 to moles.
2. 37 liters of O2 to moles.
3. How about 3.4 moles of CO to liters?
4. 122 moles of Methane to liters?

What about converting a given volume of gas to mass or a given mass to volume? Once again you have to get to that common ground first, which is the mole.

<http://www.sciencegeek.net/Chemistry/Video/Unit4/GMV8.shtml>

1. How many molecules are in 22.4 liters of methane?
2. 3.58 x 1023 molecules of propane C8H8 would occupy how much space at STP?
3. You collect 14.2 liters of CO gas from an experiment. How many molecules would be in the sample?
4. 28 grams of H2 are produce from an experiment. How much volume would they displace at STP?