Molecular Picture of Gas

- Gas is made up of many individual molecules

- Number density is number of molecules/volume:
  - $N/V = \rho/m$
  - ρ is the mass density
  - m is the mass for one molecule

- Number of moles: $n = N / N_A$
  - N_A = Avogadro's Number = 6.022×10^{23} mole^{-1}

- Mass of 1 mole of "stuff" in grams = molecular mass in u (or amu)
  - e.g., 1 mole of N_2 has mass of 2x14=28 grams