# Some Numerology

Standard units (m, kg, s) are not convenient for talking about *photons* & *electrons*

- 1 eV = energy gained by a charge +e when accelerated through a potential difference of 1 Volt
  - e = 1.6 x $10^{-19}$ C so 1 eV = 1.6 x $10^{-19}$ J
- h = 6.626 x $10^{-34}$ J·sec
- c = 3 x $10^{8}$ m/s
  - hc = 1.988 x $10^{-25}$ J·m = 1240 eV·nm
- mass of electron m = 9.1 x $10^{-34}$ kg
  - $mc^2$ = 8.2 x $10^{-13}$ J = 511,000 eV = 511 keV