

Some (more) numerology

- 1 eV = kinetic energy of an electron that has been accelerated through a potential difference of 1 V
 $1 \text{ eV} = q\Delta V = 1.6 \times 10^{-19} \text{ J}$
- h (Planck's constant) = $6.63 \times 10^{-34} \text{ J}\cdot\text{s}$
 $hc = 1240 \text{ eV}\cdot\text{nm}$
- m = mass of electron = $9.1 \times 10^{-31} \text{ kg}$
 $mc^2 = 511,000 \text{ eV}$
- $U = ke^2/r$, so ke^2 has units $\text{eV}\cdot\text{nm}$ (like hc)
 $2\pi ke^2/(hc) = 1/137$ (dimensionless)