

Decay Rules

- 1) Nucleon Number (A) is conserved.
- 2) Atomic Number (Z) is conserved.
- 3) Energy and momentum are conserved.

$$^{238}_{92}$$
U $\rightarrow ^{234}_{90}$ Th + α recall $^{4}_{2}$ He = α

recall
$${}_{2}^{4}He = 0$$

$$2) 92 = 90 + 2$$

Nucleon number conserved Charge conserved

β: example
$${}_{0}^{1}n \rightarrow {}_{1}^{1}p + {}_{-1}^{0}e^{-} + {}_{0}^{0}\overline{\nu}$$

$$_{Z}^{A}P^{*} \rightarrow_{Z}^{A}P +_{0}^{0} \gamma$$

Needed to conserve momentum.