NUCLEAR CHANGE

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Types of Change:

1. Physical Δ
2. Chemical Δ
3. Nuclear Δ ⇝ Radiation
   - Alpha α
   - Beta β
   - Gamma γ

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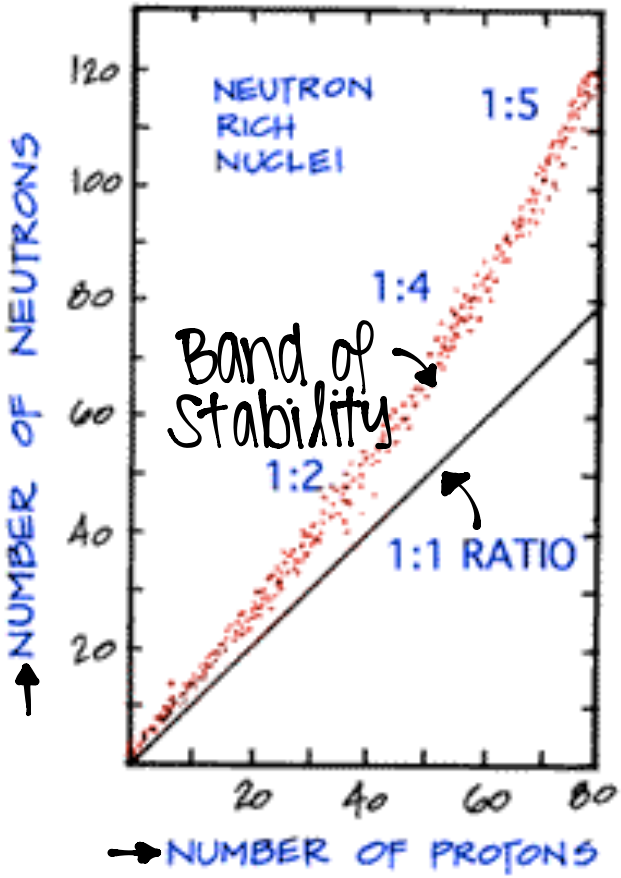
Nuclear Stability Chart



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Radioisotope: Isotope with an **unstable nucleus**

What makes a nucleus unstable?

1. Too many neutrons
2. Too few neutrons

> Use stability chart

3. An atomic # larger than 83

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Identify the isotope as stable or unstable. If unstable, tell why.

a. Hydrogen-10 $^{10}_{1}H$ unstable too many neutrons

b. Helium-4 $^{4}_{2}He$ stable

c. Calcium-39 $^{39}_{20}Ca$ stable

d. Neon-57 $^{57}_{10}Ne$ unstable too many neutrons

e. Platinum-138 $^{138}_{78}Pt$ unstable too few neutrons

f. Radium-226 $^{226}_{88}Ra$ unstable too many protons