Name _____

Chapter 10 Radioactive Decay

You may use your periodic table, p. 261.
An answer without units will be counted wrong!

In Alpha decay, a nucleus spits out 2 protons and 2neutrons called an alpha particle.

1. Determine the daughter products produced in the alpha decay of the radioactive isotopes shown below:

   a. $^{256}Lr \rightarrow$

   b. $^{231}Pa \rightarrow$

   c. $^{225}Ac \rightarrow$

   d. $^{211}Fr \rightarrow$

   e. $^{185}Au \rightarrow$

In Beta decay, a nucleus actually changes one of its neutrons into a proton. It does so by making the neutron emit an electron called a beta particle.

2. Determine the daughter products produced in the beta decay of the radioactive isotopes shown below:

   a. $^{6}He \rightarrow$

   b. $^{24}Na \rightarrow$

   c. $^{201}Au \rightarrow$

   d. $^{52}Fe \rightarrow$

   e. $^{42}K \rightarrow$

http://www.chemteam.info/Radioactivity/Writing-Alpha-Beta.html
http://www.chemteam.info/Radioactivity/WS-Radioactivity2.html

In Gamma decay, a nucleus emits a gamma ray taking energy away from the nucleus.

3. Determine the daughter products produced in the gamma decay of the radioactive isotopes shown below:

   a. $^{40}Ar \rightarrow$

   b. $^{137}Ba \rightarrow$

   c. $^{12}C \rightarrow$

   d. $^{152}Dy \rightarrow$

   e. $^{192}Pt \rightarrow$