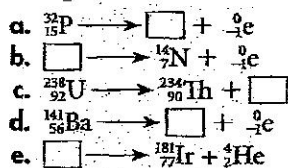
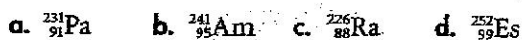


Honors Chemistry: Homework Set 3-1

1. Explain how a nuclear reaction is different from a chemical reaction. What factors do not affect nuclear reactions, but do affect chemical reactions?
2. Compare and contrast the three main types of nuclear radiation.
3. How is the atomic number of a nucleus changed by alpha decay? By beta decay? By gamma decay?
4. How does alpha decay affect the mass number of a nucleus? How does beta decay affect the mass number?
5. When polonium-210 decay by alpha radiation, what isotope is formed?
6. Complete these nuclear equations.



7. Alpha radiation is emitted during the decay of the following isotopes. Write balanced nuclear equations to describe each decay process.



8. The following radioisotopes are beta emitters. Write balanced nuclear equations to describe each decay process.

