Date:

- 1. Use the factor/label method to make the following conversions:
  - a. 35.0 nm to m
  - b. 45 A to m
  - c. 460 cm to nm
  - d. 3.0 x 10<sup>-10</sup> m to nm
  - e. 2.4 x 10<sup>-10</sup> m to A
- 2. Write a balanced equation for each of the following nuclear reactions:

Example:

$$^{219}_{86} \, \mathrm{Rn} \, \rightarrow \, ^{215}_{84} \, \mathrm{Po} \, + \, ^{4}_{2} \, \mathrm{He}$$

This is alpha decay or emission.

- a. Krypton-87 (Kr) decays by beta emission.
- b. Curium-240 (Cm) decays by alpha emission.
- c. Uranium -232 (U) decays by alpha emission.
- d. Zinc-71 decays by beta emission.
- e. Silicon-32 decays by beta emission.