



Math Worksheet

Chapters 7 & 10

Name _____

Date _____

Directions: Solve each problem. Show your work. Circle your answer.

1. A K-shell electron is removed from a tungsten atom and is replaced by a N-shell electron. What is the energy of the characteristic x-ray that is emitted?

2. A K-shell electron is removed from a tungsten atom and is replaced by a M-shell electron. What is the energy of the characteristic x-ray that is emitted?

3. What conditions are necessary for the production of x-rays?

4. What percentage of the kinetic energy of the electrons is converted to x-rays? What happens to the rest of the energy?

5. What are the two target interactions that can produce x-rays?