

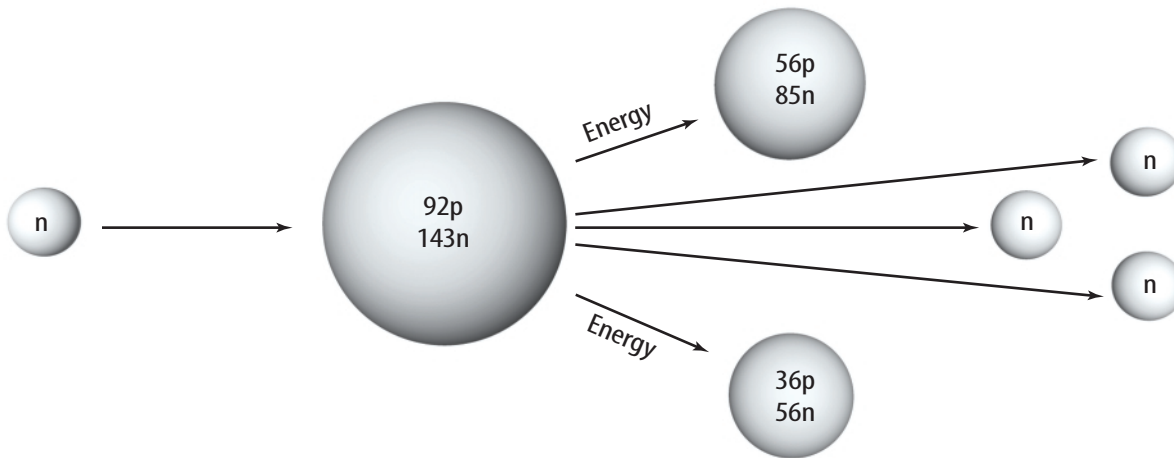
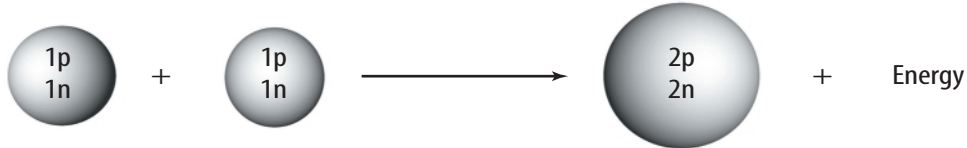
SECTION

4

Reinforcement

Nuclear Reactions

Directions: Use the diagrams below to complete the following activities.



- The diagrams show two types of nuclear reactions: nuclear fission and nuclear fusion. Label the type of reaction shown in each diagram in the space provided.
- Circle the letter of the equation that correctly explains the nuclear reaction shown in the top diagram.

a. $H-2 + H-2 \rightarrow H-4$	c. $H-1 + H-1 \rightarrow H-2$
b. $H-2 + H-2 \rightarrow He-4$	d. $H-1 + H-1 \rightarrow He-2$
- Circle the letter of the equation that correctly explains the nuclear reaction shown in the bottom diagram.

a. 1 neutron + U-235 \rightarrow Ba-141 + Kr-92 + 3 neutrons + energy	b. 1 neutron + U-238 \rightarrow Ba-141 + Kr-92 + 4 neutrons
c. Ba-141 + Kr-92 \rightarrow U-235 + 3 neutrons	d. Ba-141 + Kr-92 \rightarrow U-238
- What two elements are involved in the nuclear fusion reaction? _____
- Label each atom in the fusion reaction with its correct symbol and isotope notation.
- What three elements are involved in the fission reaction shown? _____
- Label each atom in the nuclear fission reaction with its chemical symbol and its correct isotope notation.