

CHEMISTRY HOMEWORK SHEET

NAME _____

7	15
N	N
14.0067	7 protons 7 electrons 8 neutrons



Write nuclear equations for the following processes. Include all atomic numbers and mass numbers.

Alpha decay of Am-241

Beta decay of C-14

Electron capture of Co-57

Positron emission of Co-57

Write the reaction that occurs when Li-6 is bombarded with neutrons to produce a helium nucleus and one other particle. Include all atomic numbers and mass numbers.

With what particle would you bombard bismuth-209 to produce astatine-211 and 2 neutrons? Write the appropriate nuclear equation. Include all atomic numbers and mass numbers.

Polonium-214 has a half-life of 164 seconds. How many seconds would it take for 8.0 g of Po-214 to decay to 0.25 g? Show your work for credit.

In 5.49 seconds, 1.20 g of Ar-35 decays to leave only 0.15 g. What is the half-life of argon-35? Show your work for credit.

_____ seconds

_____ seconds