Chapter 38 Problem 15 †

Given
$^{35}_{17}Cl$ $^{35}_{19}K$

Solution
a) Compare the number of nucleons.

The number of nucleons is the same for each isotope. Each has a combination of 35 protons and neutrons.

b) Compare the nuclear charge.

The chlorine has 17 protons and, therefore, has a charge of 17 times $1.6 \times 10^{-19}\ C$. The potassium has 19 protons and has a charge of 19 times $1.6 \times 10^{-19}\ C$.

†Problem from Essential University Physics, Wolfson