**Homework Check – Isotopes & Average Atomic Mass** **Name _____**

1. Element Q consists of 4 types of atoms with masses 43, 45, 49, and 51. Q-43 and Q-45 each make up 25% of all Q occurring naturally while Q-49 makes up 34% with the remaining atoms being Q-51.

(a) Compare Q-43 and Q-45 in terms of atomic structure. List 2 things that are similar and 2 things that are different about these two atoms.

Similar Different

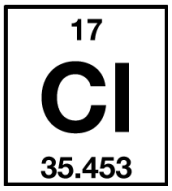
(b) Q-43 and Q-45 are _____ of the same atom.

(c) If Q-49 has 27 protons and 26 electrons, fill in the blanks below to show the atomic symbol. ($^{A}_{Z}X$)

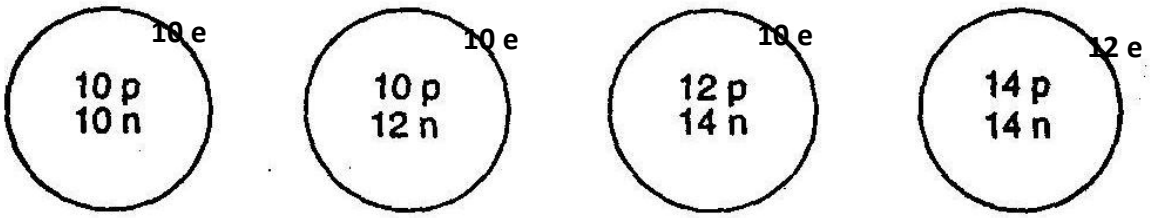
$$\square^{\square}_{\square}Q^{\square}$$

(d) Calculate the average atomic mass of element Q. Show all work and round your answer to the appropriate number of significant figures.

e) Chlorine exists as two stable isotopes. One is Chlorine-35, which makes up 75% of all naturally occurring atoms. What is the mass of the other isotope? Show work for your calculation.




f) Which of the following are isotopes of the same element? Circle them.



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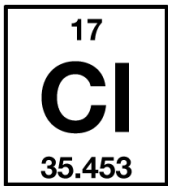


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