RQ Oxidation Numbers

Name: _____ **Date:** _____

1. What is the oxidation number of Aluminum?

   A. 3 B. $^{+}3$ C. $^{-}3$ D. 0

2. According to the periodic table, which statement correctly describes the change from a neutral atom of an element to its ion?

   A. A fluorine atom forms a F^{-1} ion by losing one electron.

   B. A sodium atom forms a Na^{+1} ion by losing two electrons.

   C. A magnesium atom forms a Mg^{+2} ion by gaining two electrons.

   D. A phosphorus atom forms a P^{-3} ion by gaining three electrons.

3. Study the table below.

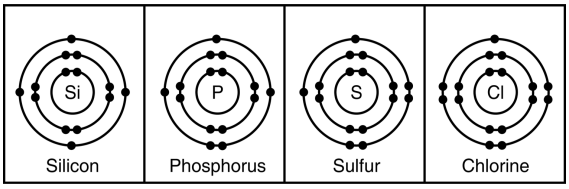
Atom	Number of Protons	Number of Neutrons	Number of Electrons
W	3	4	3
X	53	57	53
Y	55	60	54
Z	1	0	1

   Which atom has a positive charge?

   A. Atom W B. Atom X

   C. Atom Y D. Atom Z

4. Use the diagram below to answer the following question.



   Which element will gain only one electron during a chemical reaction?

   A. silicon B. phosphorus

   C. sulfur D. chlorine

5. Which of the following describes a particle that contains 36 electrons, 49 neutrons, and 38 protons?

   A. an ion with a charge of 2−

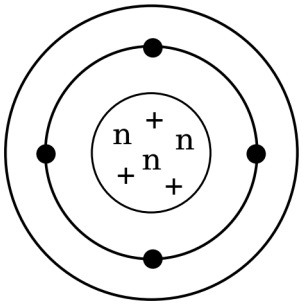
   B. an ion with a charge of 2+

   C. an atom with a mass of 38 amu

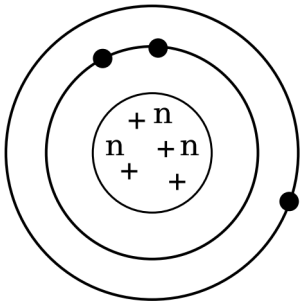
   D. an atom with a mass of 49 amu

6. Which diagram represents an electrically neutral atom?

A.



B.



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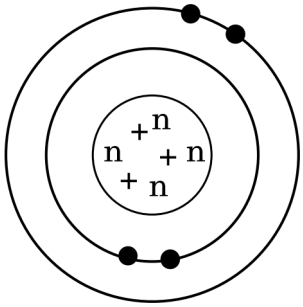

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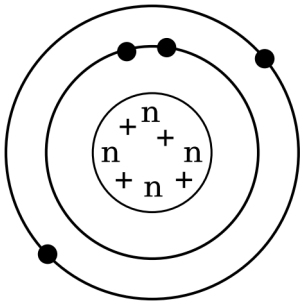

7. What causes an object to have a positive charge?

A. Protons are removed.

B. Protons are added.

C. Electrons are removed.

D. Electrons are added.

8. What oxidation number does an atom develop if it is an alkali metal?

A. +1 B. +2 C. +3 D. -1

9. What oxidation number would an atom develop if it was a halogen?

A. +1 B. -1 C. +2 D. -2

10. Which of the following is the most reactive non-metal?

A. Helium B. Fluorine

C. Bromine D. Oxygen