RQ Atomic Structure

Name: _____ **Date:** _____

1. The nucleus of an atom consists of which of the following particles?

   A. electrons only

   B. protons only

   C. protons and neutrons

   D. electrons and neutrons

2. Which distinguishes an atom of one element from an atom of a different element?

   A. the number of protons

   B. the number of neutrons

   C. the number of electrons

   D. the number of neutrons and protons

3. What is the mass number in atomic mass units of an atom with 14 protons, 14 electrons, and 16 neutrons?

   A. 14 amu B. 16 amu

   C. 30 amu D. 44 amu

4. Which of the following is found farthest from the center of an atom?

   A. nucleus B. proton

   C. neutron D. electron

5. The nucleus of a nitrogen atom consists of which of the following particles?

   A. electrons only

   B. protons only

   C. protons and neutrons

   D. electrons and neutrons

6. If the atomic number of Boron is 5 and the mass number is 11, how many protons and neutrons are there in an atom of Boron?

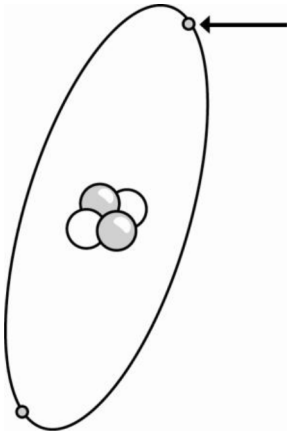
   A. 5 protons and 6 neutrons

   B. 5 protons and 11 neutrons

   C. 11 protons and 5 neutrons

   D. 11 protons and 6 neutrons

7. Use the picture of an atom below to answer the question.



   Which statement *best* describes the part of the atom that is shown by the arrow?

   A. It is an electron, and it has a negative charge.

   B. It is an electron, and it has a positive charge.

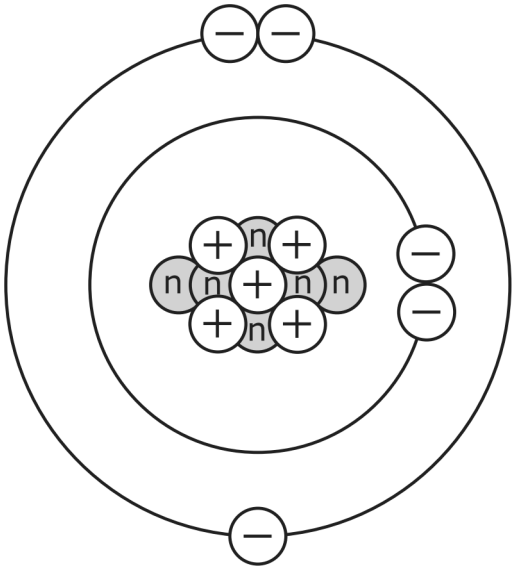
   C. It is a proton, and it has a negative charge.

   D. It is a proton, and it has a positive charge.

8. The atomic number of phosphorus is 15. How many protons are in an atom of phosphorus?

   A. 14 B. 15 C. 16 D. 31

9. This diagram represents a neutral atom of boron-11.



How many protons and neutrons does boron-11 have?

A. 11 protons, 11 neutrons

B. 11 protons, 0 neutrons

C. 6 protons, 5 neutrons

D. 5 protons, 6 neutrons

10. Which of the following comparisons correctly describes subatomic particles?

A. An electron has a negative charge and a mass larger than the mass of a proton.

B. A neutron has a negative charge and a mass smaller than the mass of a proton.

C. A neutron has a neutral charge and a mass larger than the mass of an electron.

D. A proton has a positive charge and a mass smaller than the mass of an electron.