

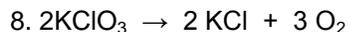
Name _____

Chemistry review sample questions

- Experiments performed to reveal the structure of the atoms led scientists to conclude that an atom's
 - Positive charge is evenly distributed throughout the atom
 - Negative charge is mainly concentrated in its nucleus
 - Mass is evenly distributed throughout its volume
 - Volume is mainly empty space
- An energy beam was sent from the cathode (-) to the anode (+). Which of the following did J.J. Thompson study using a cathode ray tube?
 - Atoms
 - Electrons
 - Neutrons
 - Nucleus
 - Quarks
- The modern model of the atom shows that electrons are:
 - Orbiting the nucleus in fixed paths
 - Found in regions called orbitals
 - Combined with neutrons in the nucleus
 - Located in the solid sphere covering the nucleus
- An experiment in which alpha particles were used to bombard thin sheets of gold foil (Rutherford's gold foil experiment) led to the conclusion that an atom is composed mostly of
 - Empty space and has a small, negatively charged nucleus.
 - Empty space and has a small, positively charged nucleus.
 - A large, dense, positively charged nucleus
 - A large, dense, negatively charged nucleus
- As an atom becomes an ion, its mass number
 - Decreases
 - Increases
 - Remains the same
- When do electrons emit photons (light) ? When the electrons:
 - are excited to a higher energy state.
 - Move to a lower energy state
 - Increase orbital speed around the nucleus
 - Explode
- In the following synthesis reaction Hydrogen and Oxygen combine to form water.
$$2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$$
If you start with 15 moles of Hydrogen how many moles of water are produced?
 - 15 moles of water
 - 7.5 moles of water
 - 30 moles of water
 - 60 moles of water

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Chemistry review sample questions



How many moles of Oxygen can be produced by letting 15 moles of Potassium Chlorate (KClO_3) react?

- A) 15 moles
- B) 7.5 moles
- C) 22.5 moles
- D) 30 moles
- E) 10 moles

9. Which statement about the mass of an electron is correct?

- a. The mass of an electron is equal to the mass of a proton.
- b. The mass of an electron is less than the mass of a proton.
- c. The mass of an electron is equal to the mass of a neutron.
- d. The mass of an electron is greater than the mass of a neutron.

10. Which statement best describes electrons?

- a. They are positive subatomic particles and are found in the nucleus.
- b. They are positive subatomic particles and are found surrounding the nucleus.
- c. They are negative subatomic particles and are found in the nucleus.
- d. They are negative subatomic particles and are found orbiting the nucleus in energy levels.

11. What is the atomic number of an element that has six protons and eight neutrons.

- a. 6
- b. 2
- c. 8
- d. 14

12. An atom has 7 protons, 6 neutrons and 10 electrons.

What is the element?

- a. Carbon
- b. Nitrogen
- c. Neon
- d. Aluminum

13. An atom has 7 protons, 6 neutrons and 10 electrons.

What is the atomic mass of the element?

- a. 7
- b. 6
- c. 13
- d. 23

14. An atom has 7 protons, 6 neutrons and 10 electrons.

What is the charge of the element?

- a. -3
- b. 3
- c. 0
- d. +1

15. Which term describes a reaction in which heat is produced?

- a. Cosmothemic
- b. Endothermic
- c. Exothermic
- d. Isothermic
- e. Nonthermic