

IPC Periodic Table Test REVIEW 2012

Name:

Date:

1. What is the difference between an element and a compound? Give an example of each.

Element: a pure chemical substance consisting of one type of atom distinguished by its atomic number

EX: H, Mg, Br, C

Compound: a pure chemical substance consisting of two or more different chemical element

EX: CO₂, H₂O, H₂SO₄,

2. The order of elements in the periodic table is based on the number of protons in the nucleus.

3. metalloids are elements that can conduct heat and electricity under certain conditions.

4. Sodium is an example of an (element / compound / mixture).

5. Oxygen has an atomic number of 16. This means that an oxygen atom has 16 protons in the nucleus.

6. The charge of an electron is -1. The charge of a proton is +1. The charge of a neutron is 0.

7. The outermost energy level of Group 18, or noble gasses, is full.

8. According to Bohr's model of the atom, electrons behave like planet's orbiting the sun.

9. The nucleus is the center of the atom & is made of protons & neutrons and has a + charge.

Alkali metals are extremely reactive, because they have one valence electron that is easily removed to form a 1+ / 2+ / 3+ ion.

10. Carbon and other non-metals are found on the right side of the periodic table.

11. The total of protons and neutrons is an atoms' mass number.

12. Atoms have no electric charge, because they have an equal number of protons and electron.

13. A lithium ion is much less / more reactive than a lithium atom, because it has a full outermost energy level.

14. Atoms of an element that have the same atomic number but different atomic masses are isotopes.

15. An electron cloud is a region where there is a high probability of finding an electron.

16. Valence electrons / neutrons / protons determine an atom's chemical properties.

17. Atoms of elements that are in the same period / group have the same number of valence electrons.

18. Neutral atoms have the same number of protons and electrons and therefore have no charge.
19. Cations are positive ions.
20. Anions are negative ions.
21. Atomic mass equals the number of protons + neutrons in the nucleus.
22. Dmitri Mendeleev developed the first periodic table. He arranged his groups by increasing atomic mass and his periods by reactivity.
23. Henry Mosely modified the periodic table, arranging the elements by increasing atomic number.
24. Atoms in the same group chemically react the same way because they have the same number of Valence Electrons.
25. Another name for metalloid is semiconductor.
26. Nonmetals are found to the right of the staircase line on the periodic table.
27. metals are found to the left of the staircase line on the periodic table.
28. metalloids are found on the staircase line.
29. Alkali metals are very reactive because they have 1 valence electron
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Family Name	Group(s)	Valence electrons	How Reactive	Metal/nonmetal	Type of ion that forms. e ⁻ gain/loss
Alkali metals	1	1	Very reactive	Metal	1 ⁺ loss of 1 e ⁻
Alkaline earth metals	2	2	Less reactive	Metal	2 ⁺ loss of 2e ⁻
Transition metals	3-12	Varies	Varies	Metal	Varies
Metalloids	13-16	varies	Varies	In between	Varies
Halogens	17	7	reactive	Nonmetal	1 ⁻ Gains 1e ⁻
Noble Gases	18	8	Not reactive	nonmetal	No ion forms