

Name _____

Periodicity Answer Key

1. Elements in the same group (column) share similar chemical properties due to having the same number of valence electrons.
2. Metals are generally shiny, good conductors of heat and electricity, and tend to lose electrons in chemical reactions, while nonmetals are typically dull, poor conductors, and tend to gain or share electrons in reactions.
3. Examples of transition metals include iron (Fe), copper (Cu), and gold (Au).
4. Noble gases are chemically inert (nonreactive) due to having a stable electron configuration with a full valence shell.
5. Elements are arranged in order of increasing atomic number from left to right and top to bottom.
6. Periodicity refers to the repeating patterns of properties (such as atomic radius, ionization energy, electronegativity) that occur in the periodic table.
7. Halogens are a group of highly reactive nonmetals located in Group 17 of the periodic table. Examples include fluorine (F), chlorine (Cl), and iodine (I).
8. Elements in the same period have the same number of energy levels or electron shells.
9. Elements in the same group have similar electron configurations in their valence shells, leading to similar chemical behavior.
10. Elements on the left side of the periodic table (such as alkali metals) tend to be highly reactive, while elements on the right side (such as noble gases) are generally unreactive. Valence electron configuration provides insight into an element's reactivity.