

Things you should know from Grade 10 Chemistry

Periodic Table

1. How is the periodic table arranged?
How does the period number relate to atomic structure?
How is the group number related?
2. What do elements of the same family have in common?
3. Find Barium. Determine the number of electrons, protons, neutrons, electron shells, valence electrons.
4. Name two different ways that chemicals can form bonds.
5. Why don't solid ionic compounds conduct electricity?
6. Demonstrate nitrogen and hydrogen combining in a reaction.
7. Compare cations and anions.
8. Name the following
 - a. MgI_2
 - b. FeBr_2
 - c. PCl_5
9. Write the formula for the following
 - a. Potassium oxide
 - b. Sodium hydroxide
 - c. Iron (III) phosphate
10. Balance the following
 - a. $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 - b. $\text{H}_2\text{SO}_4 + \text{Fe}(\text{OH})_2 \rightarrow \text{FeSO}_4 + \text{H}_2\text{O}$

Chemical Reactions

11. Describe the evidence used to predict if a chemical reaction has occurred.
12. Name four types of chemical reactions
13. List three factors that could affect the rate of a reaction?
14. What is an activity series?
15. What is the general word equation for the combustion of a hydrocarbon?
16. What health concerns prevent barbecues from being brought inside?

Acids and Bases

17. What does pH mean? How does pH determine if a solution is an acid or a base?
18. What is an indicator? Name three and list their results in acidic, basic and neutral solutions?
19. What other tests can be performed to determine if a solution is acidic, basic or neutral?
20. How is concentration of hydrogen ions related to the pH scale?
21. How are percent ionization and pH related in both acids and bases?
22. What is the general word equation for a neutralization reaction?
23. What is a salt?