

Things you should know from Grade 10 Chemistry

Periodic Table

1. How does the period number relate to atomic structure?
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 bond together.
5. Why don't solid ionic compounds conduct electricity?
6. Model the bonding that occurs between nitrogen and hydrogen.
7. Compare cations and anions.
8. Name the following
 - a. MgI_2
 - b. FeBr_2
 - c. PCl_5
 - d. CaCO_3
 - e. Al_2S_3
9. Write the formula for the following
 - a. Potassium oxide
 - b. Sodium hydroxide
 - c. Calcium nitrate
 - d. Iron (III) phosphate
 - e. Carbon tetrachloride
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. What is the difference between a physical and a chemical change?
12. Name four types of chemical reactions
13. What are the products of the following reactions?
 - a. Sodium and oxygen
 - b. magnesium and copper (II) sulfate
14. What is the general word equation for the combustion of octane (C_8H_{18})?
15. What health concerns prevent barbeques from being brought inside?

Acids and Bases

16. How can pH determine if a solution is an acid or a base?
17. What other tests can be performed to determine if a solution is acidic, basic or neutral?
18. How is concentration of hydrogen ions related to the pH scale?
19. What are two unique reactions of acids? One produces hydrogen gas and one reacts with carbonates.
20. What is the general word equation for a neutralization reaction?
21. What is a salt?