

*Answer the following in your notes, or on this review paper if there is room to do so.*

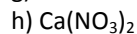
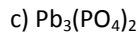
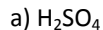
- Differentiate between physical & chemical properties. State two examples of each.
- What does WHMIS stand for? What does HHPS stand for?
- Name two household products that have an HHPS on them. Name the symbol. Give one precaution for each.
- Periodic Table: know what group each element is in and how that relates to its valence electrons?
- Identify the general location of the metal groups, nonmetal groups and metalloids?
- Differentiate between an element and a compound. Give an example of each.
- Differentiate between a binary ionic compound and a polyatomic compound. Give an example of each.
- Differentiate between an ionic compound and a molecular compound. Give an example of each.
- Differentiate between physical and chemical changes. Give an example of each.
- State the four clues that a chemical change has taken place.
- Describe how an atom become an ion.
- How do metals become ions and what is the resulting charge? How do non-metals become ion and what is the resulting charge?
- State the charge of the ions of the following atoms.  
a) Beryllium                      b) Phosphorus                      c) aluminum                      d) argon
- Name the noble gas which has the same number of electrons as an ion of the following elements.  
a) sodium                      b) phosphorous                      c) bromine                      d) calcium
- Fill in the following chart to show how an ionic compound is formed. Give the formula of each.

	Lewis Dot or Bohr Diagram of ATOM	Lewis Dot or Bohr Diagram of ION	Lewis Dot or Bohr Diagram of the COMPOUND, showing electron transfer
Magnesium			Formula:
Chlorine			
Aluminum			Formula:
Oxygen			

- Write the chemical formula for the following compounds.
 

a) potassium oxide	d) hydrobromic acid	g) iron (III) chloride
b) calcium nitrate	e) aluminum nitride	h) copper (I) chlorate
c) calcium sulfate	f) disulphur heptaoxide	i) ammonium fluoride

17. Write the names of the following compounds

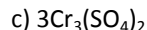
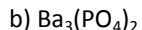


18. State the Law of Conservation of Mass.

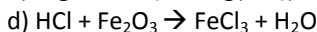
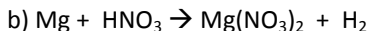
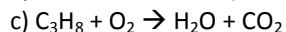
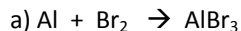
19. When 8.0 grams of methane is reacted with 16.0 grams of oxygen gas, 18.0 of water is produced how much carbon dioxide is produced?



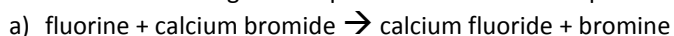
20. Count the number of atoms in each of the following (make a chart for yourself to keep track):



21. Balance the following equations.



22. Convert the following word equations to a skeleton equation and then balance them: (remember to look for EVERYTHING!!!)



23. For each of the following reactions, 1. predict the product(s), 2. identify the TYPE of chemical reaction, 3. write the chemical skeleton for the equation, and then 4. balance it!

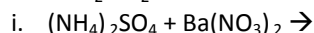
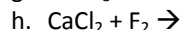
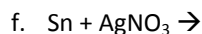
a. aluminum combines with chlorine

b. magnesium combines with aluminum chloride

c. calcium chloride combines with sodium sulfide

d. barium oxide is heated

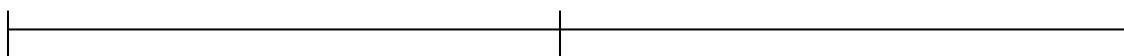
e. methane fuel burns



24. How would you know if a substance is an acid or a base by looking at its chemical formula?

State 3 other ways that you could tell if a substance was an acid or a base (using their properties).

25. Complete the diagram of the pH scale below by adding the appropriate numbers



Label the location of each of the following on the pH scale

• Weak acid

• Strong acid

• Weak base

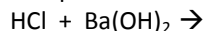
• Strong base

• Neutral

26. Write the general equation for a neutralization reaction.

(Also, be sure you are able to recognize a neutralization reaction if you see one!)

27. Complete the following neutralization reaction.



28. Explain how the pH value of a solution changes as the concentration of an acid is increased.

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NOTES: