

Label each of the following statements as true or false. (10 marks)

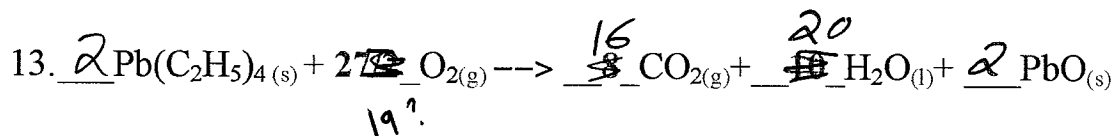
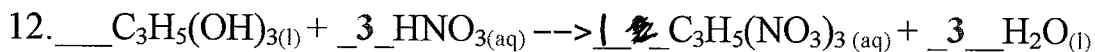
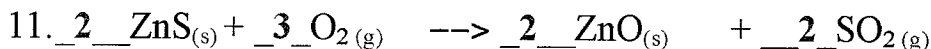
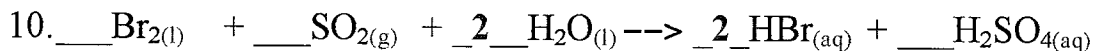
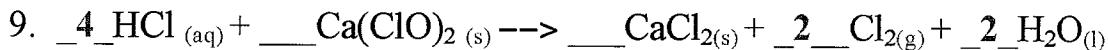
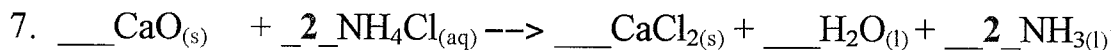
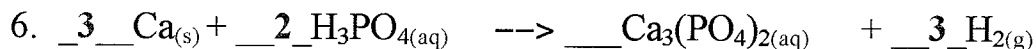
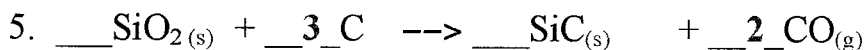
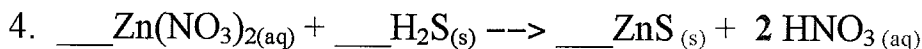
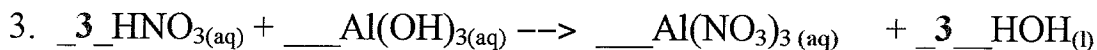
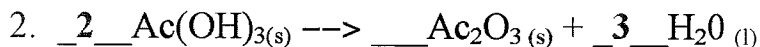
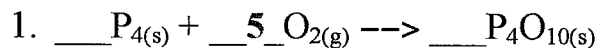
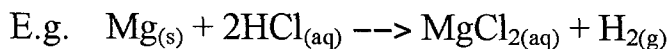
- a. T Acids form conducting solutions in water.
- b. F Acids react nonmetals to produce hydrogen gas.
- c. F Bases turn litmus paper red.
- d. T Bases have a pH greater than 7.00.
- e. F Acids feel slippery. (Never touch in a lab)
- f. T Bases taste bitter. (Never taste anything in a lab)
- g. F All nitrate-containing compounds have low solubility in water.
- h. T Molecular compounds form non-conducting solutions.
- i. F Hydrates are compounds with hydroxide molecules as part of their structure.
- j. T An ionic compound is made up of a cation plus an anion.

19. Complete the following chart for molecular compounds. Use prefixes only where necessary. (12 marks – 1 mark each square)

	Molecular Formula	IUPAC English Name
1.	$C_6H_{12}O_6(s)$	glucose
2.	$S_4N_2(s)$	Tetrasulfur dinitride
3.	$CCl_4(l)$	Carbon tetrachloride
4.	As_4O_{10}	tetraarsenic decaoxide
5.	N_3Br_8	trinitrogen octabromide
6.	$P_4O_{10}(s)$	Tetraphosphorus decaoxide
7.	$ICl_2(g)$	Iodine dichloride
8.	SF_6	Sulfur hexafluoride
9.	XeF_6	Xenon hexafluoride
10.	C_2H_5OH	ethanol
11.	C_2H_6	ethane
12.	$C_{12}H_{22}O_{11}(s)$	sucrose

Chemical Change: Balancing Chemical Formula Equations

Balance the following equations and **put in the state** wherever possible:



Molar Mass

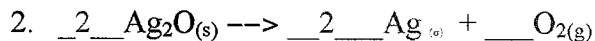
1. What amount of calcium carbonate is present in 6.03 g of the compound?
2. What is the mass of 1.2 mmol of copper (II) sulfate octahydrate?
3. A 168 g sample of an unknown element was found to contain 3.01 mol of substance.
 - a) What is the molar mass of the substance?
 - b) Which element is this substance most likely to be?

Chemical Change: Chemical Equations

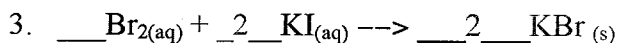
For each of the following questions classify the reaction type (f, sd, sr, dr, c or o) and predict the balanced chemical equation.



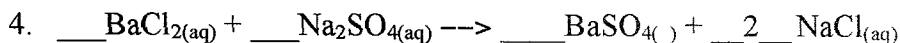
F



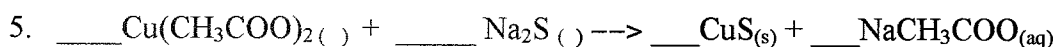
D



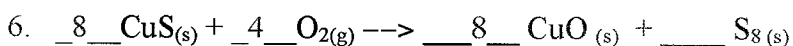
SR



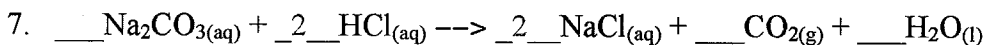
DR



DR

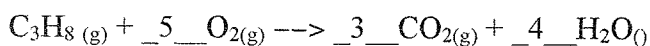


SR ~~DR~~



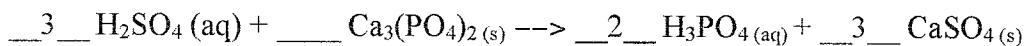
8. Propane burns in air

C



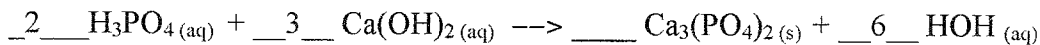
9. Sulphuric acid reacts with solid calcium phosphate.

DR



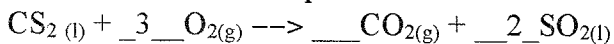
DR

10. Phosphoric acid is neutralised with a calcium hydroxide solution.



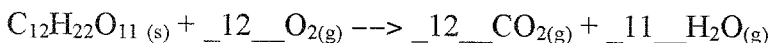
11. Carbon disulfide liquid burns in air.

DR



12. Sucrose burns in air.

C



13. A sodium carbonate solution reacts with aqueous lead(II) nitrate to recover and dispose of an environmentally hazardous substance. How does this reaction help in disposal?