Study gu	aide	e Un	it 7
Chapter	10	and	12

Matching: Match the correct vocabulary term to each statement. Write the	e letter of the correct term on the appropriate line.
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	the starting materials in a chemical reaction	a stoichiometry
2 <u>H</u>	a conversion factor made from the coefficients	b conservation of mass
_	of a balanced chemical equation	c mole
3 <u>F</u>	the maximum amount of product that is calculated	
4	the unit that represents 6.02 x 10 <sup>23</sup> particles of a	d reactants
	Substance	a limiting reagent
5 E	the substance that is completely used up in a chemical reaction	e limiting reagent
<i></i>	the substance that is completely used up in a chemical reaction	f theoretical yield
6 I	the ratio of how much product is produced in the	•
	laboratory compared to how much is calculated,	g excess reagent
	this is expressed as a percentage	1142-
7 A	the coloulations of quantities in a shamical regation	h mole ratio
/ / 1	the calculations of quantities in a chemical reaction	i percent yield
8 J	the amount of product formed in a laboratory	- F
		j actual yield
o G	substance left over ofter a reaction takes place	

## \*\*Remember all equations must be balanced.\*\* You must show work for complete credit.

the mass of products is equal to the mass of reactants

10. How many moles of carbon dioxide are there in 96.8 L at STP? 96.8 L | Imole | (4.32 Egn 6

11. How many moles of He are in 9.34 x 10 25 atoms?  $\frac{9.3 \times 10^{35} \text{ atoms}}{6.02 \times 10^{23} \text{ atoms}}$   $\frac{154.4 \text{ mol}}{6.02 \times 10^{23} \text{ atoms}}$ 

12. What is the empirical formula for  $C_4H_{10}$ ?  $C_2H_5$ 

 $C_6H_{12}O_8$   $(CO_2)$   $C_2H_4$  (CO)  $(CH_3)$   $(C_{12}H_{22}O_{11})$  $(H_2O)$   $H_2O_2$ 13. Circle the empirical formulas.

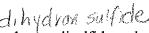
14. What is the atomic mass of mercury? # 200,59g/mol

15. What is the molar mass of mercury (II) chloride?

Hg  $Q_2$  Hg: 200.59 = 200.59  $Q_2.35.45 = \frac{70.90}{(331.49)}$ 

16. What is the mass of 13.5 moles of calcium chloride?

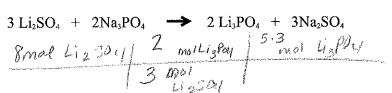
13.5 molcales 110.989 (1498.23 glace) 40.089 110.98 35.45-70.909 29n 3



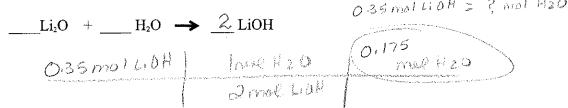
dihydron suificle.

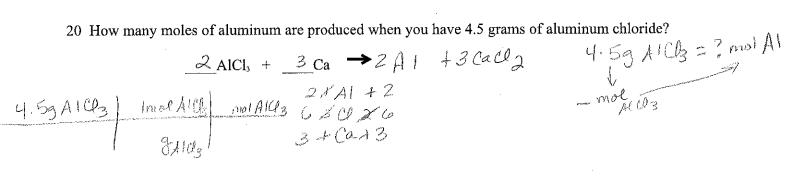
17. Write and balance the following equation: Carbon tetrachloride and hydrogen disulfide undergo a single replacement reaction to form hydrochloric acid and carbon disulfide.

18 How many moles of lithium phosphate are produced when you have 8 moles of lithium sulfate? 8, not Lizsoy = ? marligsay



19 How many moles of water is needed if you want to produce 0.35 moles of lithium hydroxide?





21 How many moles of oxygen is needed to react with 8.0 moles of ammonia? 
$$\frac{4}{1} \frac{NH_{3(g)} + 7}{NH_{3(g)} + 7} \frac{O_{2(g)}}{O_{2(g)}} + \frac{4}{12} \frac{NO_{2(g)}}{O_{2(g)}} + \frac{1}{12} \frac{O_{2(g)}}{O_{2(g)}} + \frac{1}{12} \frac{O_{2(g)}}{O_{$$

22 How many grams of CH<sub>3</sub>OH are produced if 3.50 moles of hydrogen are reacted with ex

