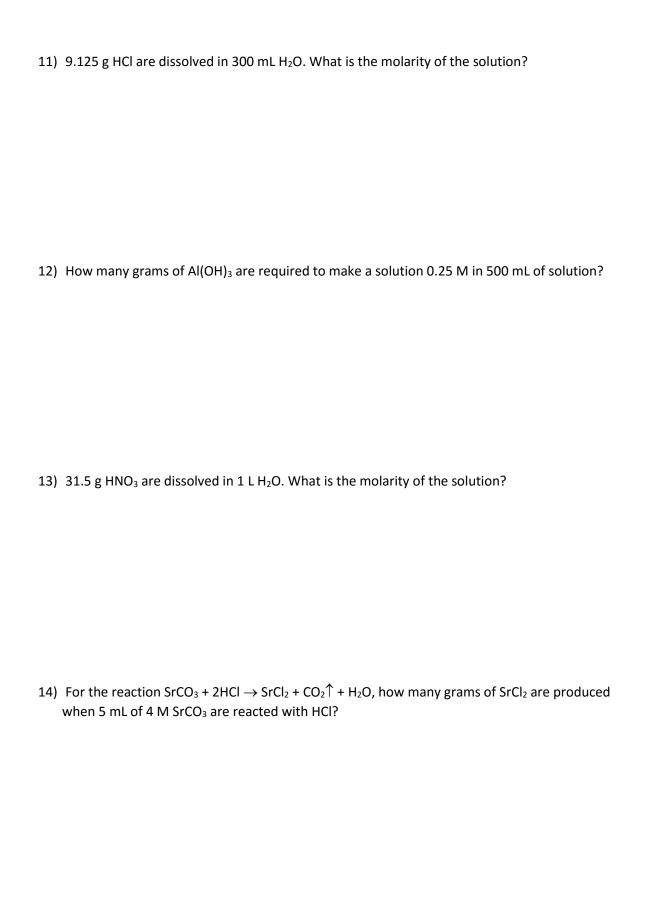
Worksheet 12 – CHEM 121 – Fall 2015	Monday Name:
	Wednesday Name:
	-programmable calculator; no notes – next 10 minutes
with notes – remaining 25 minutes at the boar	rd.
1) 5·10 ²² atoms of Li ₂ CO ₃ are how many i	moles of Li₂CO₃?
2) 7422	1. (6.612
2) 7·10 ²³ atoms of SrCl ₂ are how many m	iols of SrCl ₂ ?
3) 4·10 ²⁰ atoms of Li ₂ CO ₃ are how many	grams of Li ₂ CO ₂ ?

4)	Determine the % composition of Li in Li $_3C_6H_5O_7$.
5)	Determine the % composition of Ca in CaSO₄·4H₂O.
٦)	Determine the 70 composition of Ca in Ca3O4-4112O.
6)	Determine the % composition of Mg in MgNH ₄ PO ₄ .

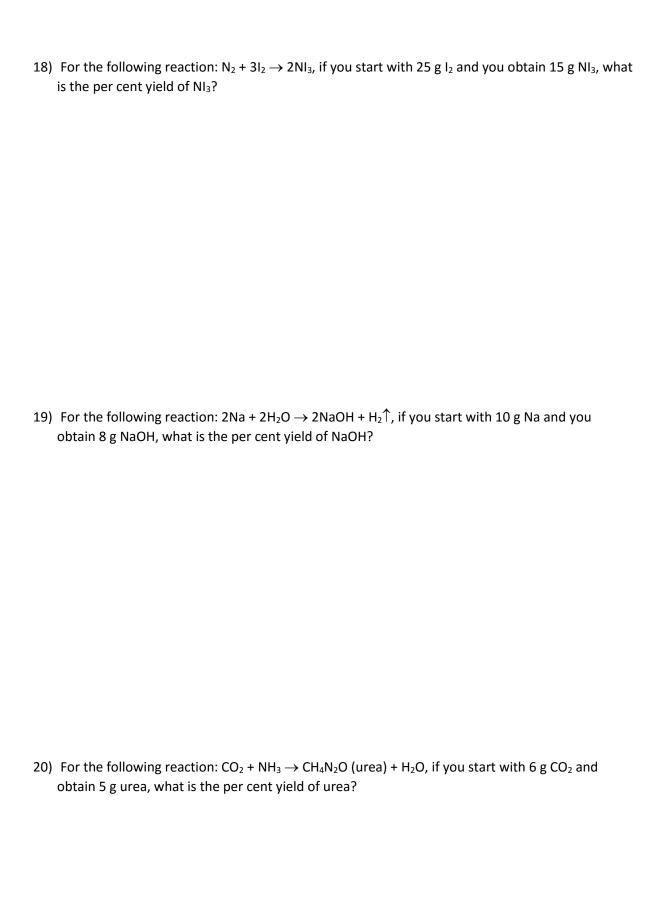
7)	Determine the % composition of H in MgNH ₄ PO ₄ .
8)	Determine the % composition of Cu in $Cu_3(AsO_4)\cdot Cu(C_2H_3O_2)_2$.
9)	98 g H_2SO_4 are dissolved in 0.5 L H_2O . What is the resulting molarity of the solution?
10)	80 g NaOH are dissolved in 250 mL H_2O . What is the molarity of the solution?



15) For the reaction $2HCl + CaCO_3 \rightarrow CaCl_2 + CO_2 \uparrow + H_2O$, how many grams $CaCl_2$ are produced when 45 mL 0.34 M $CaCO_3$ react with the HCl?

16) For the reaction NaHCO₃ + HC₂H₃O₂ \rightarrow NaC₂H₃O₂ + CO₂↑ + H₂O, how many mL of 0.5 M HC₂H₃O₂ are required to react with 10 g NaHCO₃?

17) How many mL of 0.33 M HNO₃ are required to react with 15 g AgCl as follows: HNO₃ + AgCl \rightarrow AgNO₃ + HCl?



	If 2 mol HCl reacts with AgNO $_3$ as follows: HCl + AgNO $_3$ \rightarrow AgCl + HNO3, how many mol AgCl are produced?
22)	If 36.5 g HCl reacts with AgNO₃ as above, how many grams of AgCl will be produced?
23)	If you also have 10 g $AgNO_3$ for the above two questions, which reagent is the limiting reagent?
23)	If you also have $10 \ g \ AgNO_3$ for the above two questions, which reagent is the limiting reagent?

	Given the following reaction: $N_2 + 3I_2 \rightarrow 2NI_3$, if you have 28 g N_2 , how many grams of NI_3 will you be able to make?
25)	If you also have 50 g I_2 for the above reaction in #24, what is the limiting reagent?