WLHS / Chem / Monson			Name Date Per	
	PERCENT	COMPOSITION	PROBLEM SET	
Determine the percent	age composition of ea	ch of the compound	ds below.	26
1) KMnO₄	molar mass:	g/mol	_	X
% composition:	K:	Mn:	0:	0
2) HCI	molar mass:	g/mol	_	
% composition:	H:	CI:	_	
3) Mg(NO ₃) ₂	molar mass:	g/mol	_	
% composition:	Mg:	N:	O:	
4) (NH ₄) ₃ PO ₄	molar mass:	g/mol	_	
% composition:	N:	H:	P:	O:
5) AI ₂ (SO ₄) ₃	molar mass:	g/mol	_	
% composition:	AI:	S:	O:	
6) sodium nitrite	formula:		molar mass:	/g/mol
% composition:	Na:	N:	O:	
7) calcium chlorite	formula:		molar mass:	/g/mol
% composition:	Ca:	CI:	O:	
8) dinitrogen pentoxi	de formula:		molar mass:	/g/mol
% composition:	N:	O:		
9) aluminum phosphi	ite formula:		molar mass:	/g/mol
% composition:	AI:	P:	O:	
10) carbonic acid	formula:		molar mass:	/g/mol
% composition:	H:	C:	O:	

Solve the following problems:

1) How many grams of oxygen can be produced from the decomposition of 100 g of KCIO₃?

2) How much iron can be recovered from 25.0 g Fe₂O₃?

3) How much silver can be recovered from 125 g of Ag₂S?

4) A 3.56 g sample of pure **iron** powder was heated in gaseous **chlorine**, and 10.39 g of an iron chloride was formed. What is the percent composition of this compound? (Calculate the % of iron, and the % of chlorine in this compound)

5) Calculate the percent composition of each of the following compounds:

A) acetone, CH₃COCH₃

B) aspirin, CH₃COOC₆H₄COOH

6) Copper is obtained from ores containing the following minerals:

Azurite, Cu ₃ (CO ₃) ₂ (OH) ₂	% Cu:
Chalcocite, Cu ₂ S	% Cu:
Chalcopyrite, CuFeS ₂	% Cu:
Covelite, CuS	% Cu:
Cuprite, Cu ₂ O	% Cu:
Malachite, Cu ₂ CO ₃ (OH) ₂	% Cu:

Calculate the % of each mineral that consists of COPPER. Which mineral has the highest copper content on a percent-by-mass (percent composition) basis? Why might this information be important to a mine developer?