Oxidation Reduction Worksheet

1.]	Determine the or	xidation number	of each atom in the fo	ollowing substances		
	a. NF ₃	N	F	_		
	b. K ₂ CO ₃	K	C	O		
	2 - 3					
	c. NO ₃ -	N	O	_		
	d. HIO ₄	H	I	O		
2.]	For the followin	g balanced redo	x reaction answer the	following questions		
	Fe (aq) +	$H_2O_2(aq) \rightarrow$	$Fe^{+2}(aq) + 2OH^{-1}$	¹ (aq)		
	a. What is t	the oxidation sta	te of oxygen in H ₂ O ₂ ?	·		
	b. What is t	the element that	is oxidized?			
c. What is the element that is reduced?						
	d. What is t	the oxidizing ago	ent?			
	e. What is t	the reducing age	nt?			
	f. How man	ny electrons are	transferred in the reac	etion as it is balanced?		
3.]	For the followin	g balanced redo	x reaction answer the	following questions		
4Na	OH(aq) + Ca(C	$OH)_2(aq) + C(s)$	$+4ClO_2(g) \rightarrow 4NaC$	$lO_2(aq) + CaCO_3(s) + 3H_2O$	(1)	
	a. What is t	the oxidation sta	te of Cl in ClO ₂ (g)?			
	b. What is t	the oxidation sta	te of C in C(s)?			
	c. What is t	the element that	is oxidized?			
	d. What is t	the element that	is reduced?			
	e. What is t	the oxidizing ago	ent?			
	f. What is t	the reducing age	nt?			
	g. How man	ny electrons are	transferred in the reac	etion as it is balanced?		

4. For the following balanced redox reaction answer the following quest

$16 \; HCl_{(aq)} + 5 \; SnCl_{2(aq)} + 2 \; KMnO_{4(aq)} \\ \rightarrow 2 \; MnCl_{2(aq)} \; 5 \; SnCl_{4(aq)} + 8 \; H_2O_{(l)} + 2 \; KCl_{(aq)}$

a. W	hat is the oxidation	state of Mn in KMnO ₄ (aq)?	-
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g.	How many ele	ectrons are transferred	d in the reaction a	as it is balanced?	