

Name: \_\_\_\_\_

Date: \_\_\_\_\_

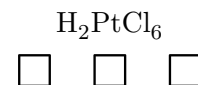
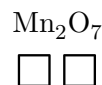
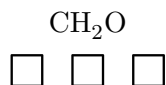
[3 pt] 1. What are three signs (ways to identify) that an oxidation or reduction reaction has occurred:

Oxidation	Reduction

[6 pt] 2. Review the rules (Tro 4.9) for assigning oxidation numbers by completing the following table.

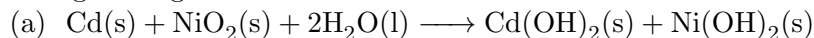
#	Statement	Example(s)
(a)	Atoms in elemental state has an oxidation number of _____	
(b)	A monatomic atom has an oxidation number identical to its _____	
(c)	Hydrogen's normal charge is: _____ Hydrogen when bonded to a metal is: _____	
(d)	Oxygen is normally: _____ Oxygen is rarely (and not in this class): _____	
(e)	Halogens usually have an oxidation number of: _____	
(f)	The sum of the oxidation numbers for a neutral molecule is: _____ The sum of the oxidation numbers for a polyatomic ion is: _____	

[7 pt] 3. What is the oxidation number of each of the atoms in the following compounds or ions.

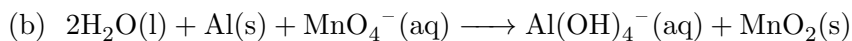


**CHE 112 - Homework - Ch 16a**

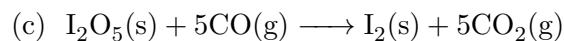
[8 pt] 4. In each of the following balanced oxidation-reduction reactions, identify the charge on all elements that undergo changes in oxidation numbers and write the balanced 1/2-reactions (electrons only).



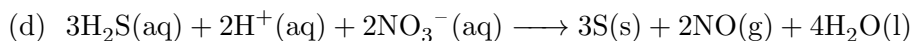
Oxidation 1/2 reaction	Reduction 1/2 reaction



Oxidation 1/2 reaction	Reduction 1/2 reaction



Oxidation 1/2 reaction	Reduction 1/2 reaction



Oxidation 1/2 reaction	Reduction 1/2 reaction

**Balance each redox reaction. Write the final answer in the space provided.**

