

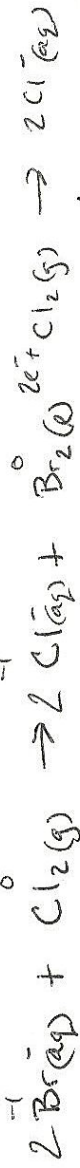
AP Chem: UNIT 4 - Redox & Stoichiometry - PRACTICE

Initials: _____

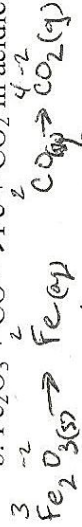
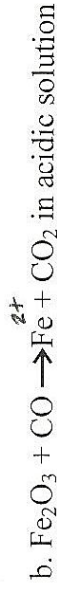
Hamilton HS.

1st Trimester

1) Write balanced equations for the following redox reactions:



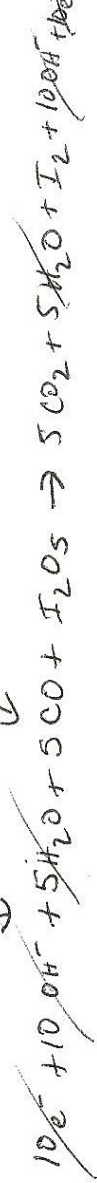
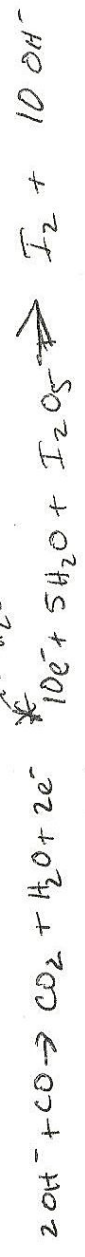
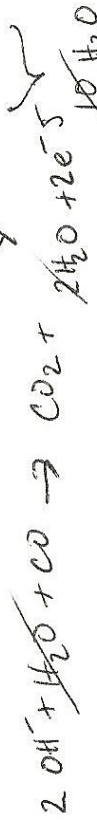
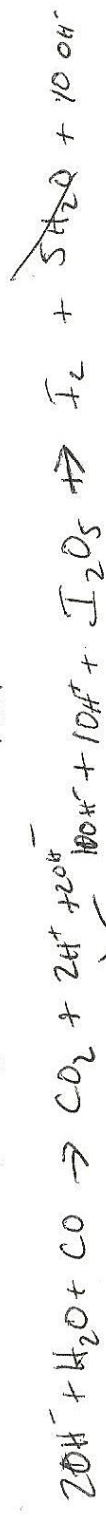
$2\text{e}^- + 2\text{Cl}^-(\text{aq}) \rightarrow 2\text{Cl}^-(\text{aq})$ NEXT STEP



$2\text{e}^- + 6\text{H}^+ + \text{Fe}_2\text{O}_3 \rightarrow 2\text{Fe} + 3\text{H}_2\text{O}$



c. $\text{CO} + \text{I}_2\text{O}_5 \rightarrow \text{CO}_2 + \text{I}_2$ in basic solution



These work out to be "perfectly" balanced. Yes, the 1st one was crazy easy.

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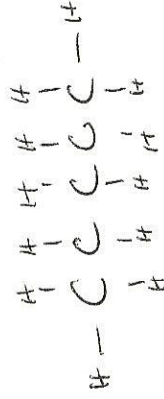
Hamilton H.S.

Initials: _____

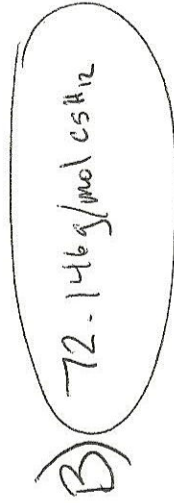
1st Trimester

2) Consider the hydrocarbon pentane.

- What is the molecular formula?
- What is the Molar Mass?
- Write a balanced equation for the combustion of pentane.
- Given a density of 0.626 g/mL, calculate how much oxygen gas - in grams, is needed to burn 83.28 L of pentane.



Pentane = 5 carbons, saturated



$$C = 12.01 \text{ g} \times 5 = 60.05 \text{ g}$$

$$H = 1.008 \text{ g} \times 12 = 12.141 \text{ g}$$

$$72.146 \text{ g}$$



D) Knowns: $D = 0.626 \text{ g/mL}$ Molar ratio is 1:8

83.28 L C_5H_{12}	1000 mL C_5H_{12}	0.626 g C_5H_{12}	1 mol C_5H_{12}	8 mol O_2	32.00 g O_2
1 L C_5H_{12}	1 mL C_5H_{12}	72.146 g C_5H_{12}	1 mol C_5H_{12}	1 mol C_5H_{12}	1 mol O_2

$184988 \text{ g } O_2 \sim 1.85 \times 10^5 \text{ g } O_2$