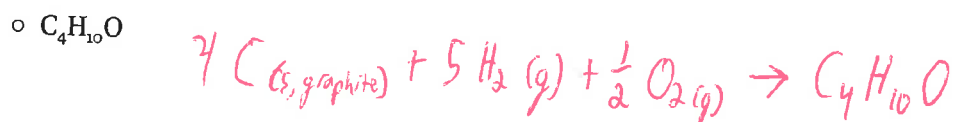
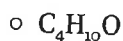
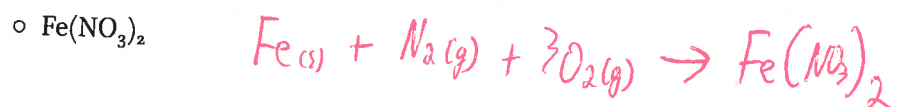
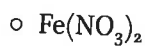


Quiz 6.5 – Enthalpies of Formation

Name: _____

Question 1 (2 points)

Write the formation reaction (which is the basis for the enthalpy of formation) for each compound



Question 2 (3 points)

Give the molar enthalpy of reaction for the following reaction:



You will need the following values:

Compound	ΔH_f°	Compound	ΔH_f°
$\text{Fe}_2\text{O}_3(\text{s})$	$-824.2 \frac{\text{kJ}}{\text{mol}}$	$\text{CO}(\text{g})$	$-110.5 \frac{\text{kJ}}{\text{mol}}$
$\text{Fe}(\text{s})$	$0 \frac{\text{kJ}}{\text{mol}}$	$\text{CO}_2(\text{g})$	$-393.5 \frac{\text{kJ}}{\text{mol}}$

$$\Delta H_{\text{rxn}} = \sum_{\text{products}} \nu \cdot \Delta H_f - \sum_{\text{reactants}} \nu \cdot \Delta H_f$$

$$\Delta H_{\text{rxn}} = 2 \cdot 0 + 3 \cdot (-393.5 \text{ kJ/mol}) - (-824.2 \text{ kJ/mol}) - 3 \cdot (-110.5 \text{ kJ/mol})$$

$$\Delta H_{\text{rxn}} = -248 \text{ kJ/mol}$$