The basis for calculating heats of reaction is known by the following formula:

$$\Delta H_{rxn} = H_{products}$$
 - $H_{reactants}$

For the following balanced equations, find the ΔH_{rxn} . Use the values of ΔH_f from the table given in class.

1)
$$2 \text{ Fe(s)} + 3 \text{ CO}_2(g) \rightarrow \text{Fe}_2\text{O}_3(s) + 3 \text{ CO}(g)$$

2)
$$4 \text{ NH}_3(g) + 7 \text{ O}_2(g) \rightarrow 4 \text{ NO}_2(g) + 6 \text{ H}_2\text{O}(g)$$

3)
$$3 \text{ NO}_2(g) + \text{H}_2\text{O}(1) \rightarrow 2 \text{ HNO}_3(1) + \text{NO}(g)$$