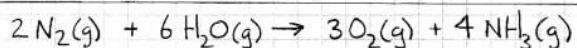
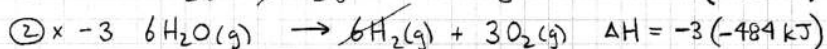
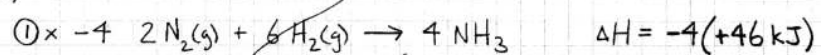
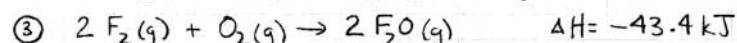
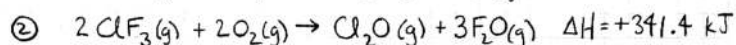
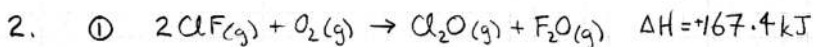


(a)

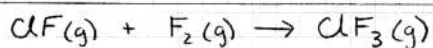
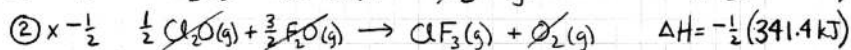
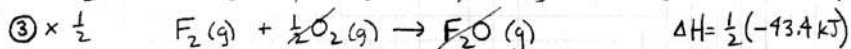
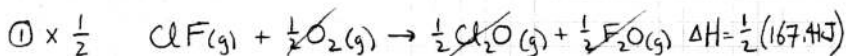


$$\Delta H = -4(+46 \text{ kJ}) + (-3)(-484 \text{ kJ})$$

$$= +1268 \text{ kJ}$$

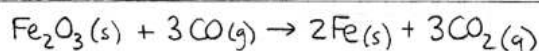
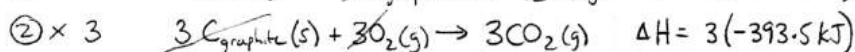
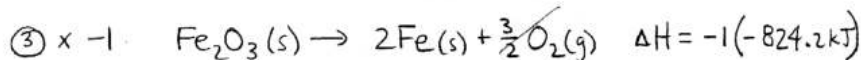
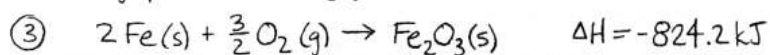
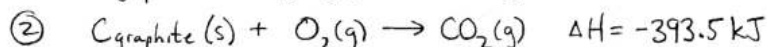
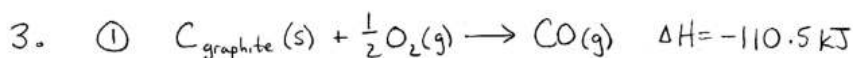


(a)



$$\Delta H = \frac{1}{2}(167.4 \text{ kJ}) + \frac{1}{2}(-43.4 \text{ kJ}) + (-\frac{1}{2})(341.4 \text{ kJ})$$

$$= -108.7 \text{ kJ}$$



$$\Delta H = (-1)(-824.2 \text{ kJ}) + (-3)(-110.5 \text{ kJ}) + 3(-393.5 \text{ kJ})$$

$$= -24.8 \text{ kJ}$$