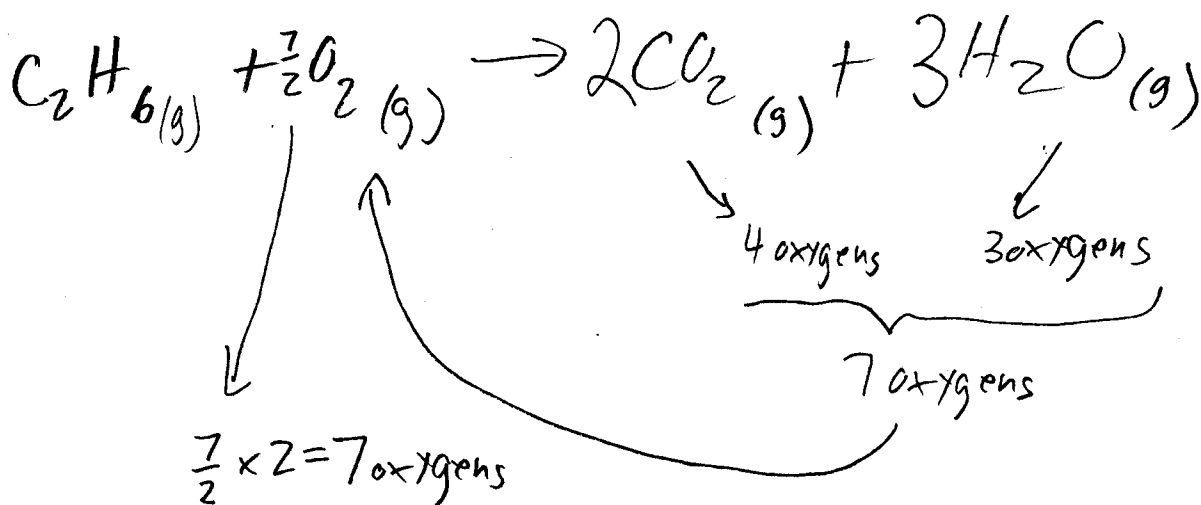


# Practice Quiz #33 Answers



$$\Delta H_{\text{rxn}}^{\circ} = \sum n \Delta H_f^{\circ}(\text{P}) - \sum n \Delta H_f^{\circ}(\text{R})$$

which means.....

$$= [\text{Products}] - [\text{Reactants}]$$

$$= [(2)(-393.5 \text{ kJ/mol}) + (3)(-241.82)] - [-84.68 + 0]$$

$$= [-787 + -725.46] - [-84.68]$$

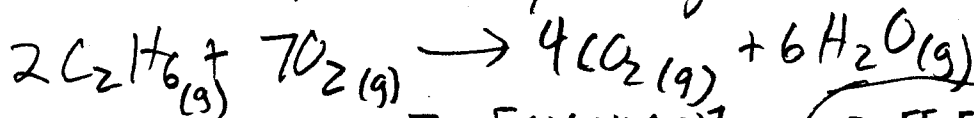
$$= -1512.46 + 84.68$$

$$\Delta H_{\text{rxn}}^{\circ} = -1427.78 \text{ kJ/mol}$$

**EXOTHERMIC;**  
 $\Delta H$  is -

There is 1427.6 kJ of heat released per mol of  $\text{C}_2\text{H}_6$ .

If you balanced the reaction with whole number coefficients, the heat released per mol is still the same, but you would have calculated the heat released per 2 moles! I would accept that, though!



$$\Delta H_{\text{rxn}}^{\circ} = [(4)(-393.5) + (6)(-241.82)] - [(2)(-84.68)] = -2855.56 \text{ kJ}$$