Answers to Practice Problems E in page 356

Answers to Practice Problems E

1. −1428.6 kJ; exothermic
2. −64.5 kJ; exothermic

Homework — GENERAL

Additional Practice Have students determine the enthalpy change for the following reactions and determine if the reactions are exothermic or endothermic.

1. $N_2(g) + 3H_2(g) \longrightarrow 2NH_3(g)$
   Ans. −91.8 kJ, exothermic
2. $2H_2O(l) \longrightarrow 2H_2(g) + O_2(g)$
   Ans. 571.6 kJ, endothermic
3. $C_3H_8(g) + 5O_2(g) \longrightarrow 3CO_2(g) + 4H_2O(g)$ Ans. −2043.0 kJ, exothermic
4. $2H_2O(l) + O_2(g) \longrightarrow 2H_2O_2(l)$
   Ans. 196 kJ, endothermic
5. $3C(s, \text{graphite}) + 4H_2(g) \longrightarrow C_3H_8(g)$ Ans. −104.7 kJ, exothermic

LS Logical