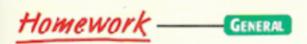
## Answers to Practice Problems E in page 356

Answers to Practice Problems E 1. –1428.6 kJ; exothermic 2. –64.5 kJ; exothermic



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

- 1.  $N_2(g) + 3H_2(g) \rightarrow 2NH_3(g)$ Ans. -91.8 kJ, exothermic
- **2.**  $2H_2O(l) \rightarrow 2H_2(g) + O_2(g)$ Ans. 571.6 kJ, endothermic
- 3.  $C_3H_8(g) + 5O_2(g) \rightarrow 3CO_2(g) + 4H_2O(g)$  Ans. -2043.0 kJ, exothermic
- 4.  $2H_2O(l) + O_2(g) \rightarrow 2H_2O_2(l)$ Ans. 196 kJ, endothermic
- 5.  $3C(s, graphite) + 4H_2(g) \rightarrow C_3H_8(g)$  Ans. -104.7 kJ, exothermic Logical