

SOLUTION CHAP. 9

①

$$\Delta E = q + w$$

$$q \text{ endothermic} \equiv +15.6 \text{ kJ}$$

$$w \text{ WORK ON SYSTEM} \equiv -1.4 \text{ kJ}$$

$$\Delta E = 15.6 \text{ kJ} - 1.4 \text{ kJ} = +14.2 \text{ kJ}$$



$$\Delta H = +890 \text{ kJ}$$

$$5.8 \text{ g CH}_4 \left[\frac{1 \text{ mole CH}_4}{16 \text{ g}} \right] = 0.363 \text{ MOLES CH}_4$$

$$0.363 \text{ MOLES CH}_4 \left[\frac{890 \text{ kJ}}{1 \text{ mole}} \right] =$$

$$= 32.3 \text{ kJ}$$

