

page 322: 41(A)

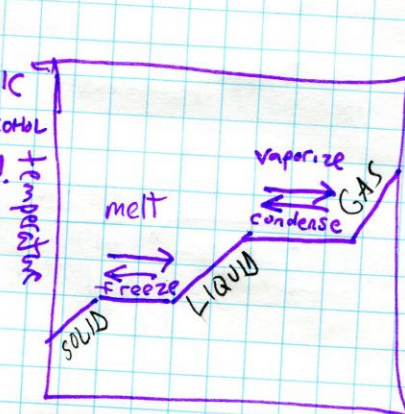
$$\#41(A) \quad 8.50 \times 10^2 \text{ cal} \times \left( \frac{1 \text{ Calorie}}{1000 \text{ cal}} \right) = 0.850 \text{ Calories}$$

#44 (A) THE REACTION RELEASES HEAT.  
IT IS EXOTHERMIC

(B) The surroundings are  
everything that's not in the  
system -- the whole world.

#45 (A) EXOTHERMIC

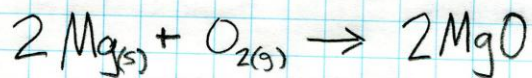
(B) ENDOTHERMIC



(C) BURNING ALCOHOL IS EXOTHERMIC

(D) BAKING A POTATO IS ENDOTHERMIC

(p.306) #15



$$\Delta H = -1204 \text{ kJ/mol}$$

#16

$$12.5 \text{ g CH}_3\text{OH} \times \left( \frac{1 \text{ mol CH}_3\text{OH}}{32.05 \text{ g CH}_3\text{OH}} \right) \times \left( \frac{-1235 \text{ kJ}}{1 \text{ mol CH}_3\text{OH}} \right) =$$

Answer: -482 kJ

#18

$$15.0 \text{ g H}_2 \times \left( \frac{1 \text{ mol H}_2}{2.02 \text{ g H}_2} \right) \times \left( \frac{-536 \text{ kJ}}{1 \text{ mol H}_2} \right) =$$

answer:

-3980 kJ

9h