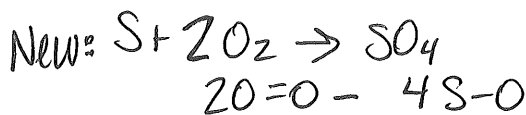
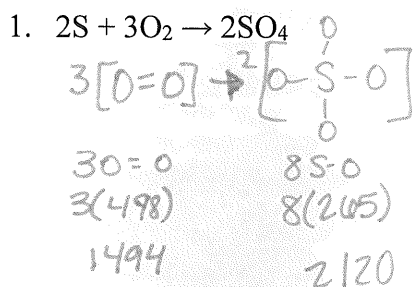


Answer Key

BOND ENERGY PRACTICE PROBLEMS

Find the change in enthalpy for each of the following equations. Given the information, is it an exothermic or an endothermic reaction?

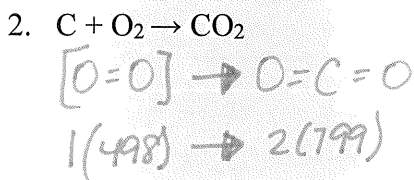


$$\Delta H = 1494 + (-2120)$$

$$\Delta H = -626 \text{ kJ exothermic}$$

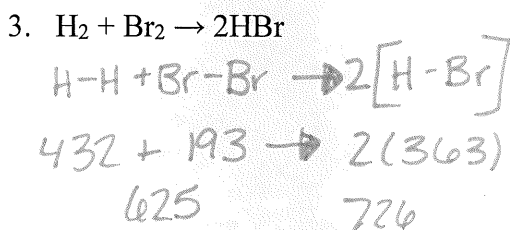
$$\Delta H = 996 - 1060$$

$$\Delta H = -64 \text{ kJ/mol exothermic}$$

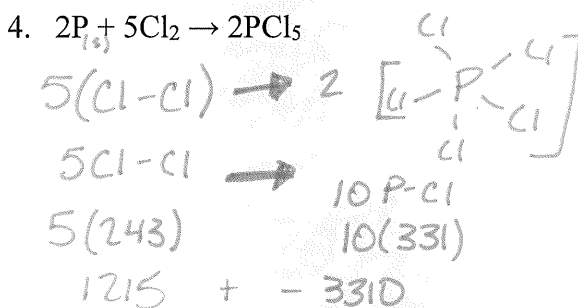


$$498 + (-1598) = -1100$$

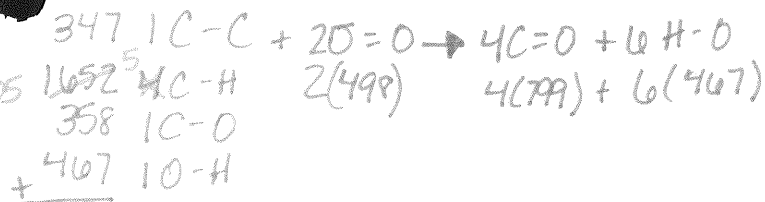
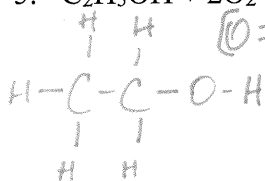
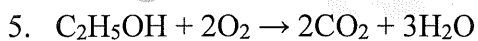
$$\Delta H = -1100 \text{ kJ exothermic}$$



$$\Delta H = -101 \text{ kJ exothermic}$$



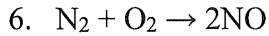
$$\Delta H = -2095 \text{ kJ exothermic}$$



$$4233 - 5998$$

$$\Delta H = -2178 \text{ kJ exothermic}$$

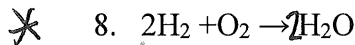
Answer Key



$$945 + 498 \rightarrow 2(607)$$

$$1443 + -1214 = 229$$

$\Delta H = 229 \text{ kJ}$
 endothermic

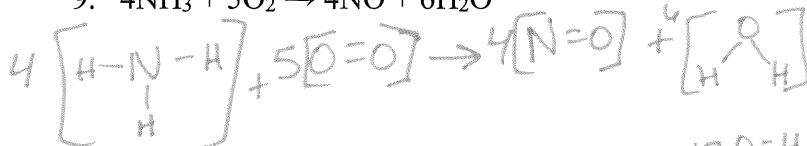
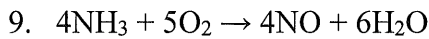


$$2(432) + 498 \rightarrow 2(467)$$

$$1362 + -934 = 428$$

$\Delta H = -506 \text{ kJ/mol}$
 exothermic

$\Delta H = 428 \text{ kJ}$
 endothermic

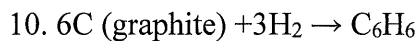


$$12(N-H) + 50=O \rightarrow 4N=O + 12O-H$$

$$4692 + 5(498) \rightarrow 4(607) + 12(467)$$

$$7182 + -8032 = -850$$

$\Delta H = -850 \text{ kJ}$
 exothermic



6C-H
3C-C
3C=C



$$1296 + (6(413) + 3(347) + 3(614))$$

$$1296 + 5361 = -4065 \text{ kJ}$$

exothermic

