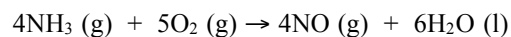


**AP Chem Ch. 5 Study Sheet 5****Multiple Choice**

Identify the choice that best completes the statement or answers the question.

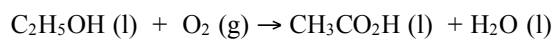
1. Given the data in the table below,  $\Delta H^{\circ}_{\text{rxn}}$  for the reaction



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^{\circ}$ (kJ/mol)
$\text{H}_2\text{O}(\text{l})$	-286
$\text{NO}(\text{g})$	90
$\text{NO}_2(\text{g})$	34
$\text{HNO}_3(\text{aq})$	-207
$\text{NH}_3(\text{g})$	-46

- a. -1172  
b. -150  
c. -1540  
d. -1892  
e. The  $\Delta H_f^{\circ}$  of  $\text{O}_2(\text{g})$  is needed for the calculation.
2. Given the data in the table below,  $\Delta H^{\circ}_{\text{rxn}}$  for the reaction

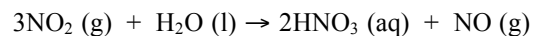


is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^{\circ}$ (kJ/mol)
$\text{C}_2\text{H}_4(\text{g})$	52.3
$\text{C}_2\text{H}_5\text{OH}(\text{l})$	-277.7
$\text{CH}_3\text{CO}_2\text{H}(\text{l})$	-484.5
$\text{H}_2\text{O}(\text{l})$	-285.8

- a. -79.0  
b. -1048.0  
c. -476.4  
d. -492.6  
e. The value of  $\Delta H_f^{\circ}$  of  $\text{O}_2(\text{g})$  is required for the calculation.

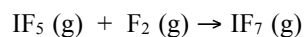
3. Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
$\text{H}_2\text{O}(\text{l})$	-286
$\text{NO}(\text{g})$	90
$\text{NO}_2(\text{g})$	34
$\text{HNO}_3(\text{aq})$	-207
$\text{NH}_3(\text{g})$	-46

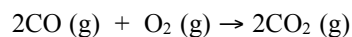
- a. 64  
 b. 140  
 c. -140  
 d. -508  
 e. -64
4. Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
$\text{IF}(\text{g})$	-95
$\text{IF}_5(\text{g})$	-840
$\text{IF}_7(\text{g})$	-941

- a. 1801  
 b. -1801  
 c. 121  
 d. -121  
 e. -101
5. Given the data in the table below,  $\Delta H^\circ$  for the reaction



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
$\text{CO}(\text{g})$	-110.5
$\text{CO}_2(\text{g})$	-393.7
$\text{CaCO}_3(\text{s})$	-1207.0

- a. -566.4  
 b. -283.2  
 c. 283.2  
 d. -677.0  
 e. The  $\Delta H_f^\circ$  of  $\text{O}_2(\text{g})$  is needed for the calculation.