

### Hess's Law Worksheet

1. Calculate the standard enthalpy change ( $\Delta H^\circ$ ) for the formation of 1 mole of acetone (assume the standard heat of the formation of formic acid is 0 kJ/mol).

2. The combustion of carbon and steam produces a mixture called syngas, which can be used as a fuel or as a starting material for other reactions. If we assume carbon can be represented by graphite, the equation for the production of syngas is

3. The reaction involved in the conversion of iron ore to iron is

4. Find the  $\Delta H^\circ$  for the reaction below, given the following reactions and subsequent  $\Delta H^\circ$  values:



5. Find the  $\Delta H^\circ$  for the reaction below, given the following reactions and subsequent  $\Delta H^\circ$  values:



6. Find the  $\Delta H^\circ$  for the reaction below, given the following reactions and subsequent  $\Delta H^\circ$  values:



7. Find the  $\Delta H^\circ$  for the reaction below, given the following reactions and subsequent  $\Delta H^\circ$  values:



8. Find the  $\Delta H^\circ$  for the reaction below, given the following reactions and subsequent  $\Delta H^\circ$  values:



9. Find the  $\Delta H^\circ$  for the reaction below, given the following reactions and subsequent  $\Delta H^\circ$  values:

