

# Participation Assignment

## CHEM 1090-General Chemistry I

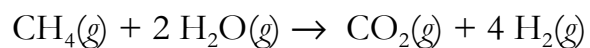
Name:

#13

Section: 33, TR

Due Date: Tuesday 2/19/2019

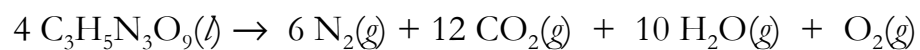
1. We are going to calculate the standard enthalpy of reaction for the steam conversion of methane, CH<sub>4</sub>, to hydrogen and carbon dioxide gases:



a. Write the standard enthalpy of formation equations for methane, water vapor, and carbon dioxide.

b. Manipulate these equations and calculate the enthalpy of reaction.

2. We are going to calculate the standard enthalpy of reaction for the decomposition of nitroglycerin,  $\text{C}_3\text{H}_5\text{N}_3\text{O}_9(l)$ :



a. Write the needed standard enthalpy of formation equations.

b. Manipulate these equations and calculate the enthalpy of reaction.