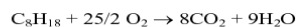


General Chemistry II Exam 1 Practice Problems

Multiple Choice

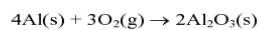
Identify the letter of the choice that best completes the statement or answers the question.

- _____ 1. How much heat is released when 75 g of octane is burned completely if the enthalpy of combustion is -5,500 kJ/mol C_8H_{18} ?



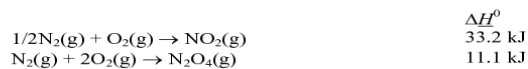
- a. 7200 kJ
- b. 8360 kJ
- c. 4.1×10^5 kJ
- d. 3600 kJ
- e. 5500 kJ

- _____ 2. Calculate the amount of heat released in the complete combustion of 8.17 grams of Al to form $Al_2O_3(s)$ at 25°C and 1 atm. ΔH_f° for $Al_2O_3(s)$ = 1676 kJ/mol



- a. 254 kJ
- b. 203 kJ
- c. 127 kJ
- d. 237 kJ
- e. 101 kJ

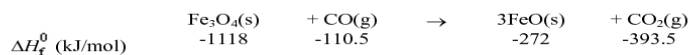
- _____ 3. Given the following at 25°C and 1.00 atm:



Calculate the ΔH° for the reaction below at 25°C.
 $2NO_2(g) \rightarrow N_2O_4(g)$

- a. +11.0 kJ
- b. +44.3 kJ
- c. +55.3 kJ
- d. -22.1 kJ
- e. -55.3 kJ

- _____ 4. Calculate ΔH° for the following reaction at 25.0°C.



- a. -263 kJ
- b. 54 kJ
- c. 19 kJ
- d. -50 kJ
- e. 109 kJ