

SCH4U A7

[K: / 3 ; T: / 5 ; C: / 3 ; A: / 6]

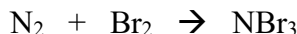
Please name file submissions accordingly: **LastNameFirstName_AssignmentNumber**
e.g. BayginHerman_A7

Use the periodic table linked under “Classroom News”. Answer all of the following questions. If a multiple guess question, then clearly indicate your answer. If a short/long answer questions, use complete sentences unless otherwise stated (ex. list). If a calculation question, then type out all of your work in linear form, or using the equation editor found in most text editors. If you need images, use a simple graphics/painting program, then copy-paste/import into this file. **Pictures of handwritten work will NOT be accepted. Submit ONE file, containing all parts, for each assignment.**

1. The following rate law is provided for a particular reaction at particular temperature. Determine value of the rate constant, k , when initially $[C] = 0.310$ M, $[D] = 3.75 \times 10^{-3}$ M, and $[E] = 0.0211$ M, resulting in a rate of 6.83×10^{-4} mol/L·s. Answer to hundredths. [K 3]

$$\text{Rate} = k [C] [D] [E]$$

2. Use Bond Energies to find ΔH for the following reaction. Express your answers in kJ/mol; clearly **show all changes/adjustments**. (use the data sheet from the NEWS on course website) Answer to hundredths. [T 5]



4. Use Hess's law to find ΔH for the following reactions. Express your answers in kJ/mol of the **first reactant on the left in each equation**; clearly **show all changes/adjustments**. (use the data sheet from the NEWS on course website) Answer to hundredths. [A 6]

