HN Math III Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 2, Day 2 HW Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ period \_\_\_\_\_

**Complete the following “Logical Arithmetic” problems based on your knowledge of exponent facts.**

1. Logical Arithmetic: If $9^{x}=81$, then x = \_\_\_\_.
2. Logical Arithmetic: If $6^{x}=1$, then x = \_\_\_\_.
3. Logical Arithmetic: If $4^{x}=64$, then x = \_\_\_\_.
4. Logical Arithmetic: If $3^{x}=81$, then x = \_\_\_\_.
5. Logical Arithmetic: If $10^{x}=100000$, then x = \_\_\_\_.

**Complete the following:**

1. 
2. 