

# Atomic Structure Worksheet

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Hr: \_\_\_\_\_

1. How did Rutherford know that the nucleus wasn't negatively charged?
2. Does knowing how many electrons a neutral atom has tell you its elemental identity? If so, how?
3. Give the complete chemical symbol for an atom that has 16 neutrons and whose atomic # is 15.
4. Bromine has two abundant isotopes, one with 44 neutrons and the other with 46 neutrons. Give the complete chemical symbols for both isotopes.
5. How many electrons do atoms of each of the isotopes in problem 4 have?
6. Give the complete chemical symbol for the atom that has 38 protons, 50 neutrons and 36 electrons.
7. What is wrong with this symbol?  
 ${}_{7}^{12}\text{C}$
8. Fill in the following table for four neutral atoms:

|                    |                       |    |    |    |
|--------------------|-----------------------|----|----|----|
| <b>Symbol</b>      | ${}_{8}^{15}\text{O}$ |    |    |    |
| <b>Atomic mass</b> |                       | 16 | 37 |    |
| <b>Atomic #</b>    |                       | 8  |    |    |
| <b>Protons</b>     |                       |    |    |    |
| <b>Neutrons</b>    |                       |    |    | 12 |
| <b>Electrons</b>   |                       |    | 17 | 11 |