Name: $\qquad$
Period: $\qquad$ Date:

## Ion Worksheet

1. The atomic number of oxygen is 8 and the mass number is 16 .
A. Draw an oxygen atom.
B. What is the charge of the oxygen atom you just drew? $\qquad$
C. The oxygen atom can gain two electrons (to make 8 ) and become an oxygen ion. Draw the ion.
D. What is the charge of the oxygen ion?(Hint: It is not neutral)
E. What is the symbol for the oxygen ion?
2. The atomic number of lithium is 3 and the mass number is 6 .
A. Draw the lithium atom.
B. What is the charge of the lithium atom you just drew?
C. The lithium atom loses one electrons and become lithium ion. Draw the ion.
D. What is the charge of the lithium ion? (Hint: It is not neutral)
E. What is the symbol for the lithium ion?
3. The atomic number of nitrogen is 7 and the mass number is 14 . Draw the $\mathrm{N}^{-3}$ ion.
4. Fill in the blanks. Following are ions.

| Element | Atom <br> No. | \# of <br> p+ | \# of <br> e- | Charge | Symbol |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Sodium | 11 | 11 | 10 | +1 | $\mathrm{Na}^{+1}$ |
| Chlorine |  | 17 |  | -1 |  |
| Sulfur | 16 |  |  |  |  |
| Calcium |  | 20 |  | +2 |  |
| Iodine | 53 |  |  |  | $\mathrm{I}^{-1}$ |
| zinc |  | 30 | 28 |  |  |
| Oxygen |  |  |  |  |  |
| Magnesium |  |  |  |  |  |

5. Write the formula for the ionic molecule made when these ions combine.

|  | $\mathrm{Cl}^{-1}$ | $\mathrm{O}^{-2}$ | $\mathrm{~S}^{-2}$ | $\mathrm{~N}^{-3}$ | $\mathrm{Br}^{-1}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{Na}^{+1}$ |  |  |  |  |  |
| $\mathrm{Ag}^{+1}$ |  |  |  |  |  |
| $\mathrm{~K}^{+1}$ |  |  |  |  |  |
| $\mathrm{Zn}^{+2}$ |  |  |  |  |  |
| $\mathrm{Al}^{+3}$ |  |  |  |  |  |
| $\mathrm{Mg}^{+2}$ |  |  |  |  |  |
| $\mathrm{Fe}^{+3}$ |  |  |  |  |  |
| $\mathrm{Sn}^{+4}$ |  |  |  |  |  |

6. Name these compounds.
a. KCl
b. PbI
c. MgO
d. AgCl
e. $\mathrm{ZnCl}_{2}$
f. $\mathrm{AlBr}_{3}$
g. $\mathrm{Fe}_{2} \mathrm{O}_{3}$
h. $\mathrm{CoCl}_{2}$
i. KBr
j. $\quad \mathrm{BaCl}_{2}$
k. MgS
