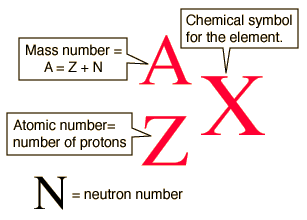
**AP Chemistry** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Ion/Isotope Practice** Date: \_\_\_\_\_\_\_\_\_\_\_\_ Blk: \_\_\_\_



Complete the following table using the clues provided.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Element Name** | **Element**  **Symbol** | **Protons**  **(Z)** | **Neutrons** | **Atomic Mass (A)** | **Electrons** | **Charge** | **Isotopic Symbol** |
|  | K |  |  |  | 18 |  |  |
|  |  | 31 | 40 |  |  |  |  |
| Chlorine |  |  |  |  | 18 |  |  |
|  | Ni |  | 32 |  | 26 |  |  |
|  |  | 78 | 119 |  |  | 2+ |  |
| Selenium |  |  |  | 81 |  | 2- |  |
|  |  |  |  |  |  |  | http://preparatorychemistry.com/images/I_127_minus_symbol_CS.gif |

***Knowledge Check***

1. Which is more likely to be a naturally occurring isotope of magnesium: Mg-25 or Mg-30? Explain.
2. If a Martian sample of pure silver is found have a new 3rd isotope (Ag-111), what would be the new atomic mass for the element given the following percent abundance values?

Ag-107 (50.86%), Ag-109 (48.04%), Ag-111 (1.10%)

1. What are the two general periodic trends we see for the formation of ions? (Hint: one has to do with cations vs anions, the other is a charge value trend)
2. What is the common “rule” that most elements follow when forming ions?