$\qquad$
$\qquad$

## Isotope Symbols

Mass Number $\rightarrow \mathbf{A}$
(* of protons + \# of newtrons)


1. What is an isotope?
2. In the word representation of an isotope, Element-99, what does the number represent?
3. How do you find the protons, electrons, and neutrons in different isotopes?

For each of the following isotopes, write the number of protons, neutrons, and electrons. Write the Symbol Representation of the isotope.

|  | Nitrogen-15 | Nitrogen-20 |
| :---: | :--- | :--- |
| Symbol <br> Representation |  |  |
| \# of protons |  |  |
| \# of neutrons |  |  |
| \# of electrons |  |  |


|  | Carbon-12 | Carbon-16 |
| :---: | :--- | :--- |
| Symbol <br> Representation |  |  |
| \# of protons |  |  |
| \# of neutrons |  |  |
| \# of electrons |  |  |


|  | Chromium-58 | Chromium-63 |
| :---: | :--- | :--- |
| Symbol <br> Representation |  |  |
| \# of protons |  |  |
| \# of neutrons |  |  |
| \# of electrons |  |  |


|  | Sodium-12 | Sodium-20 |
| :---: | :--- | :--- |
| Symbol <br> Representation |  |  |
| \# of protons |  |  |
| \# of neutrons |  |  |
| \# of electrons |  |  |


|  | Sulfur-23 | Sulfur-25 |
| :---: | :--- | :--- |
| Symbol <br> Representation |  |  |
| \# of protons |  |  |
| \# of neutrons |  |  |
| \# of electrons |  |  |


|  | Helium-3 | Helium-4 |
| :---: | :--- | :--- |
| Symbol <br> Representation |  |  |
| \# of protons |  |  |
| \# of neutrons |  |  |
| \# of electrons |  |  |

Introduction to Isotopes
Chemistry

Name:
Period:
$\qquad$ Date: $\qquad$
Fill in the isotope names and any missing information, including isotope numbers from the chart. Use your periodic table and the information provided.

|  |  |  |
| :--- | :---: | :---: |
| \# of protons | 25 |  |
| \# of neutrons | 17 | 15 |
| \# of electrons |  |  |


|  | Selenium-30 | Selenium-35 |
| :--- | :--- | :--- |
| \# of protons |  |  |
| \# of neutrons |  |  |
| \# of electrons |  |  |


|  |  |  |
| :--- | :---: | :---: |
| \# of protons |  |  |
| \# of neutrons | 48 | 51 |
| \# of electrons |  | 46 |


|  |  |  |
| :--- | :---: | :---: |
| \# of protons | 32 |  |
| \# of neutrons | 30 | 32 |
| \# of electrons |  |  |


|  | -22 | -25 |
| :--- | ---: | ---: |
| \# of protons |  |  |
| \# of neutrons |  |  |
| \# of electrons | 11 |  |


|  |  |  |
| :--- | :---: | :---: |
| \# of protons |  |  |
| \# of neutrons | 113 | 111 |
| \# of electrons | 55 |  |


|  | Germanium- | Germanium- |
| :--- | :---: | :---: |
| \# of protons |  |  |
| \# of neutrons | 33 | 36 |
| \# of electrons |  |  |


|  | Iodine- | Iodine- |
| :--- | :---: | :---: |
| \# of protons |  |  |
| \# of neutrons | 32 | 35 |
| \# of electrons |  |  |


|  |  | Iron- |
| :--- | :--- | :--- |
| \# of protons |  |  |
| \# of neutrons | 27 | 30 |
| \# of electrons |  |  |


|  | -10 |  |
| :--- | :--- | :--- |
| \# of protons |  | -12 |
| \# of neutrons |  | 6 |
| \# of electrons | 6 |  |

