# Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour: \_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

# Chemistry: *Atomic Number and Mass Number*

Complete the following chart and answer the questions below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Element***  ***Name*** | ***Atomic***  ***Number*** | ***Number of***  ***Protons*** | ***Number of***  ***Neutrons*** | ***Mass Number*** |
| carbon |  |  |  | 12 |
|  | 8 |  | 8 |  |
| hydrogen |  |  |  | 1 |
|  |  | 6 |  | 14 |
| hydrogen |  |  | 2 |  |
| nitrogen |  |  |  | 14 |
|  |  |  | 1 | 2 |
|  | 92 |  | 146 |  |
| cesium |  |  | 82 |  |
|  | 11 |  | 12 |  |
|  |  | 47 |  | 108 |
| tungsten |  |  | 110 |  |
|  |  |  | 45 | 80 |
|  |  | 24 |  | 52 |
|  |  |  | 89 | 152 |
| silver |  |  |  | 107 |
|  | 76 |  | 114 |  |

How are the *atomic number* and the *number of protons* related to each other?

How do the *number of protons*, *number of neutrons*, and the *mass number* relate to each other?

What is the *one thing* that determines the identity of an atom (that is, whether it is an oxygen atom or a carbon atom, etc.)?

Draw the 5 atomic models we discussed in class.

**How** have the models changed over time?

**Why** have the models changed over time?

**Could** the current standard model change? **What** would have to happen for it to change?

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