For the following, use your periodic table and the information given about the following nuclei to complete the table. Assume the most common isotope.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Element | Chemical Symbol | Nuclear symbol | Atomic Number (Charge Number) | Atomic Mass (Mass Number or Nucleon Number) | Protons | Neutrons |
| Sodium | Na | $$$$ | 11 | 23 | 11 | 12 |
| ***Yttrium*** | Y | $$$$ | ***39*** | 90 | 39 | 51 |
| Zinc | ***Zn*** | $$$$ | 30 | 65 | ***30*** | ***35*** |
| Chlorine | ***Cl*** | $$$$ | 17 | ***37*** | ***17*** | 20 |
| ***Cobalt*** | Co | $$$$ | 27 | 59 | ***27*** | ***32*** |
| ***Aluminum*** | Al | $$$$ | ***13*** | ***27*** | ***13*** | ***14*** |
| Iron | ***Fe*** | $$$$ | ***26*** | ***56*** | ***26*** | 30 |
| Nitrogen | ***N*** | $$$$ | ***7*** | ***14*** | ***7*** | ***7*** |
| ***Hydrogen*** | H | $$$$ | ***1*** | ***1*** | ***1*** | ***0*** |
| ***Tin*** | ***Sn*** | $$$$ | 50 | ***120*** | ***50*** | 70 |
| Bromine | ***Br*** | $$$$ | ***35*** | 80 | ***35*** | ***45*** |
| Oxygen | ***O*** | $$$$ | ***8*** | ***16*** | ***8*** | 8 |

For the following, use the information given about the following nuclei to complete the table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Isotope | Isotope Symbol | Nuclear Symbol | Charge Number | Mass Number/ Nucleon Number | Protons | Neutrons |
| Sodium-22 | Na-22 | $$$$ | ***11*** | ***22*** | 11 | 11 |
| Hydrogen-2 | ***H-2*** | $$$$ | 1 | ***2*** | ***1*** | ***1*** |
| ***Fluorine-20*** | ***F-20*** | $$$$ | 9 | 20 | ***9*** | ***11*** |
| ***Boron-11*** | ***B-11*** | $$$$ | ***5*** | ***11*** | 5 | 6 |
| ***Calcium-42*** | Ca-42 | $$$$ | ***20*** | ***22*** | ***20*** | ***12*** |
| ***Chlorine 37*** | ***Cl-37*** | $$$$ | ***17*** | 37 | ***17*** | 20 |
| Helium-3 | ***He-3*** | $$$$ | ***2*** | ***3*** | ***2*** | ***1*** |
| ***Sulfur-32*** | S-32 | $$$$ | ***16*** | ***32*** | ***16*** | ***16*** |
| ***Titanium-47*** | ***Ti-47*** | $$$$ | 22 | ***47*** | ***22*** | 25 |
| ***Nitrogen-15*** | ***N-15*** | $$$$ | ***7*** | 15 | 7 | ***8*** |
| Carbon-14 | ***C-14*** | $$$$ | ***6*** | ***14*** | ***6*** | ***8*** |
| ***Lithium-7*** | ***Li-7*** | $$$$ | ***3*** | ***7*** | 3 | 4 |
| Alpha | He-4 | $$$$ | 2 | ***4*** | ***2*** | ***2*** |
| Beta | — | $$$$ | -1 | ***0*** | ***0*** | 0 |
| Gamma | — | $$$$ | 0 | ***0*** | 0 | ***0*** |
| electron |  | $$$$ | ***-1*** | 0 | ***0*** | ***0*** |
| proton |  | $$$$ | ***1*** | ***1*** | ***1*** | ***0*** |