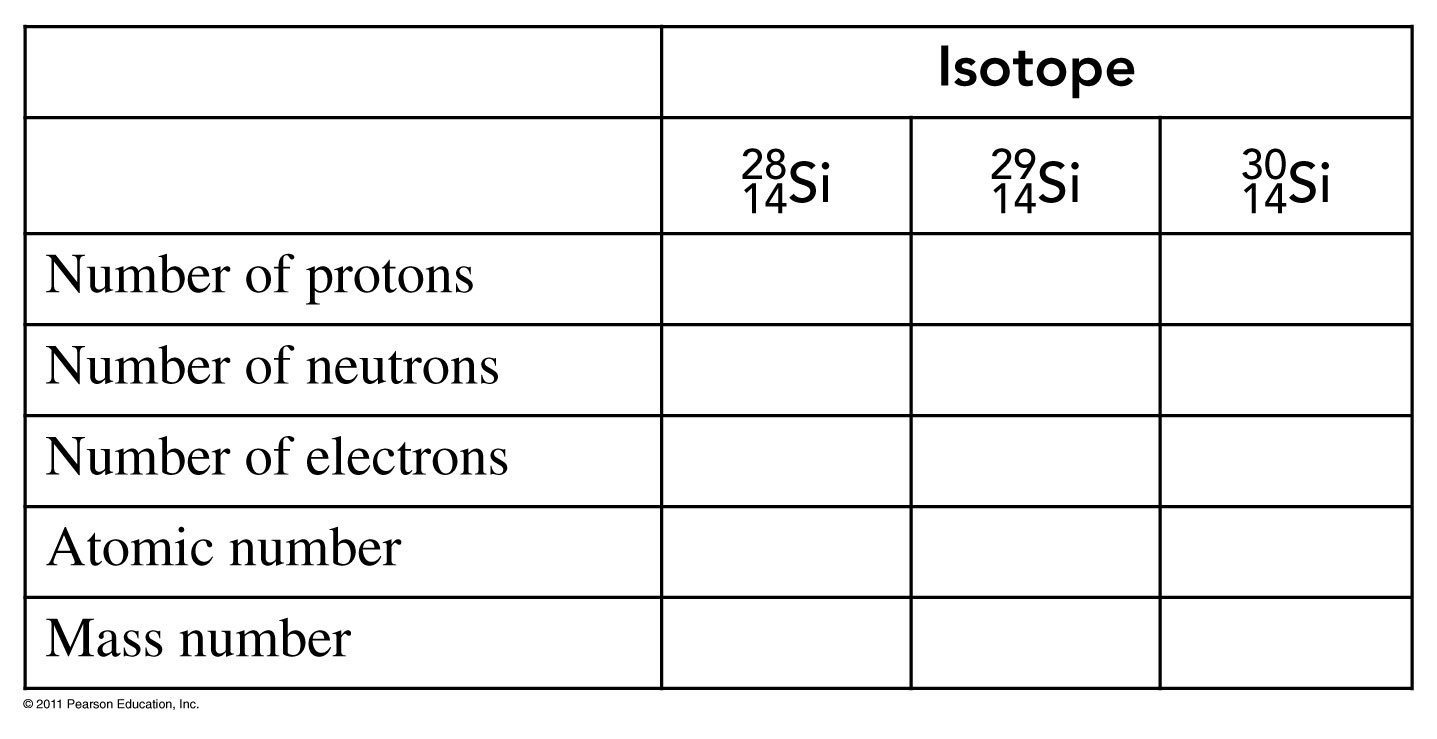
**Complete the following table**

**Write the nuclear symbol for atoms with the following subatomic particles:**

|  |  |  |
| --- | --- | --- |
| **8p, 8n, 8e** | **17p, 20n, 17e** | **47p, 60n, 47e** |

**Analyze and answer the following. Support your answer**

|  |
| --- |
| **Copper has two isotopes: Cu-63 and Cu-65. Given that the atomic mass of copper from the periodic table is 63.546 amu, which of the two isotopes is most abundant? Explain your answer.** |

**Analyze the following chart and determine what elements are isotopes of the same element.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | **Atom A** | **Atom B** | **Atom C** | **Atom D** | | #P | 15 | 10 | 15 | 15 | | #N | 15 | 10 | 10 | 15 | | #E | 15 | 15 | 15 | 10 | | Mass |  |  |  |  | |

**Calculate the atomic mass. Show all your work.**

|  |
| --- |
| **Gallium is an element found in lasers used in compact disc players. In a sample of gallium, there is 60.11% of 69Ga (atomic mass 68.93) atoms and 39.89% of 71Ga (atomic mass 70.92) atoms. What is the atomic mass of gallium?** |

**Draw a bar graph representing the decay of Barium-139 if you start with a 20 g sample and it must decay to less than 2 g. The half-life of Barium-139 is 80 minutes.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Bar Graph Representation**  **and Percent** |  |  |  |  |  |
| **Fraction Remaining Mass** |  |  |  |  |  |
| **Mass in Grams** |  |  |  |  |  |
| **Time passed (years)** |  |  |  |  |  |
| **# of Half-life** |  |  |  |  |  |