**Review Sheet: Flame Test & Average Atomic Mass**

1. Explain the process through which line spectra are formed when a sample of an element is heated.
2. How does spectroscopy work?
3. Fill out the blanks in the following chart:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Symbol | Protons | Neutrons | Electrons | Mass (amu) | Atomic number |
| Pb |  |  |  | 209 |  |
|  | 93 | 140 |  |  |  |
|  |  |  | 76 |  | 190 |
| Rb |  | 49 |  |  |  |

1. What is the different between “atomic mass” and “average atomic mass”?
2. What is an isotope? Why do elements have different isotopes?
3. What is the average atomic mass of an element that has the following information:

17F Abundance = 1.6%

18F Abundance = 1.8%

19F Abundance = 94.2%

20F Abundance = 2.5%