Nuts and Bolt Activity 1.4 Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Observations:

|  |  |
| --- | --- |
| Mass of sample and cup (g) |  |
| Mass of cup (g) |  |
| Mass of sample (g) |  |
| Number of boltium-1 atoms |  |
| Number of boltium-2 atoms |  |
| Number of boltium-3 atoms |  |
| Mass of all the boltium-1 atoms (g) |  |
| Average mass of 1 boltium-1 atom (g) |  |
| Mass of all the boltium-2 atoms (g) |  |
| Average mass of 1 boltium-2 atom (g) |  |
| Mass of all the boltium-3 atoms (g) |  |
| Average mass of 1 boltium-3 atom (g) |  |

Analysis:

|  |  |
| --- | --- |
| a) | Total mass of the sample only: Average atomic mass per atom: |
| b) | Percent abundance of all the boltiums |
| c) | Average atomic mass x total number of atoms |
| d) | Experimental total mass of sample versus answer from c) |
| e) | Average atomic mass as the sum of the abundance times the mass of each isotope |
| f) | Ne-19 vs Ne-20 vs Ne-22 |
| g) | Isotope vs isotopic abundance vs average atomic mass |
| h) | Analogy benefits/drawbacks |