Average Atomic Mass CW:

Name:

1. Rubidium is a soft, silvery-white metal that has two naturally occurring isotopes, the first isotope has a mass of 84.9118 amu and an abundance of 72.15%. The second isotope has a mass of 86.9092 amu and an abundance of 27.85%. Calculate the average atomic mass.
2. Magnesium has 3 isotopes with the following masses and abundances. Calculate the average atomic mass.

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| --- | --- | --- |
| Isotope | Abundance | Mass (amu) |
| 24Mg | 78.99% | 23.9850423 |
| 25Mg | 10.00% | 24.9858374 |
| 26Mg | 11.01% | 25.9825937 |

1. On the periodic table, the mass of carbon is listed as 12.01 amu, yet not one single atom of carbon weighs 12.01 amu. How is this possible?
2. Lead has 4 isotopes whose information is below. Calculate the average atomic mass of lead.

|  |  |  |
| --- | --- | --- |
| Isotope | Abundance | Mass (amu) |
| 204Pb | 1.40% | 203.973037 |
| 206Pb | 24.10% | 205.974455 |
| 207Pb | 22.10% | 206.975885 |
| 208Pb | 52.40% | 207.976641 |

1. Neon has an atomic mass of 20.18 amu. It has three isotopes, 20Ne has a mass of 19.992 amu and a % abundance of 90.51%, 21Ne has a mass of 20.994 amu and a % abundance of 0.2700%, and 22Ne has a % abundance of 9.220%. Determine the mass of the isotope 22Ne.