

Practice:

1. In nature, silicon is composed of three isotopes. These isotopes are 92.23% Si-28, 4.67% Si-29 and 3.10% Si-30. Calculate the average atomic mass of silicon.
2. The two stable isotopes of boron exist in the following proportions: 19.78% 1_5B (10.01 u) and 80.22% ${}^{11}_5B$ (11.01 u). Calculate the average atomic mass of boron.
3. Copper exists at two naturally occurring isotopes: ${}^{63}_{29}Cu$ (62.93 u) and ${}^{65}_{29}Cu$ (64.93 u). These isotopes have isotopic abundances of 69.1% and 30.9% respectively. Calculate the average atomic mass of copper.
4. Lead occurs naturally as four isotopes. These isotopes are 1.37% ${}^{204}_{82}Pb$ (204.0 u), 26.26% ${}^{206}_{82}Pb$ (206.0 u), 20.82% ${}^{207}_{82}Pb$ (207.0 u), and 51.55% ${}^{208}_{82}Pb$ (208.0 u). Calculate the average atomic mass of lead.