

Name \_\_\_\_\_

### Answer Key: Isotopes and Atomic Mass

1. Isotopes are atoms of the same element with different numbers of neutrons. They have the same number of protons but different numbers of neutrons.

2. The atomic mass of an element is calculated by considering the abundance of each isotope and its mass, usually listed as an average atomic mass on the periodic table.

3. Carbon has three isotopes: carbon-12 (6 protons, 6 neutrons), carbon-13 (6 protons 7 neutrons), and carbon-14 (6 protons, 8 neutrons).

4. Carbon-14 dating is important for determining the age of ancient artifacts and fossils. It works by measuring the decay of carbon-14 isotopes in organic materials.

5. False