

39 It was once thought that the mass of an atom is spread uniformly through the volume of the atom. When α -particles are directed at a piece of gold foil, the results led scientists to believe instead that nearly all the mass of the gold atom is concentrated at a point inside the atom.

Which effect is possible **only** if nearly all the mass of the gold atom is concentrated at a point?

- A** a few α -particles bounce back
- B** most α -particles are only slightly deflected
- C** some α -particles pass through without any deflection
- D** some α -particles are absorbed

40 Which pair of nuclei are isotopes of one another?