

Revised August 2011



3. Write the complete atomic symbol (including element symbol, atomic number and mass number for each of the following species. (4)
- (a) An atom that contains 7 protons and 8 neutrons.

 - (b) An isotope of bromine that has a mass number of 81.

 - (c) An atom with atomic number 28 and 30 neutrons.

 - (d) An atom with 23 protons and an equal number of neutrons.
4. In this question, assume that phosphorus has only two isotopes, one with a mass number of 30 and one with a mass number of 32.

The average mass of a naturally occurring sample of P is found to be 30.97376. What are the relative abundances (percentages) of the two phosphorous isotopes in the naturally occurring sample?