

**03** Atoms are made of subatomic particles.

**03.1** The radius of an atom is larger than the radius of its nucleus.

How many orders of magnitude are there between the radius of an atom and the radius of its nucleus?

**[1 mark]**

Tick **one** box.

3

4

5

6

**03.2** An element can have different isotopes.

What are isotopes?

**[1 mark]**

Tick **one** box.

Atoms that have the same mass number, but different atomic number

Atoms that have the different mass number and different atomic number

Atoms that have different mass number, but the same atomic number

Atoms that all have the same mass number and atomic number

**03.3**  $^{16}_7\text{N}$  is an isotope of nitrogen.

How many protons, electrons and neutrons does this isotope contain?

**[3 marks]**

Number of protons = \_\_\_\_\_

Number of electrons = \_\_\_\_\_

Number of neutrons = \_\_\_\_\_