

## Answer on Question #82818 – Chemistry – Other

### Task:

Element Q, Atomic number = 7, Mass number = 14. What is the number of protons, neutrons, electrons, and electronic configuration?

### Solution:

Number of protons = atomic number Z

Number of neutrons = mass number - atomic number = A - Z

The atomic number is the number of protons in an atom's nucleus, so we can tell right away that an atom of **Q** contains **7 protons**.

The mass number (14) is the total number of protons and neutrons.

So, there must be  $14 - 7 = 7$  **neutrons**.

Since atoms are electrically neutral, there must be as many electrons as there are protons.

A **Q** atom needs **7 electrons** to balance the **7 protons**.

Electronic configuration:  **$1s^2 2s^2 2p^3$** .

Element Q = **N (nitrogen)**.

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