

Elements, compounds & Isotopes

Reading: pages 96-99 in both higher & foundation

Knowledge

1. What does the 'atomic number' tell us?
2. Which two particles are found in the nucleus of the atom?
3. Complete the table to show the properties of protons, neutrons and electrons

Particle	Charge	Mass
Protons		
Neutrons		
electrons		

4. What is a compound?
5. What sort of bonding occurs between metals and non-metals?
6. What does a compound made from non-metals exist as?
7. How many elements are contained in NaHCO_3 ?
8. How many atoms are contained in NaHCO_3 ?
9. Which particle in the atom is the one involved in chemical reactions?
10. What is an isotope?

Apply

1. Describe the structure of a Magnesium atom. You should refer to the names and numbers of all sub atomic particles.

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2. Describe how to use the mass number and atomic number to find the number of neutrons in an atom

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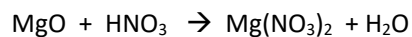
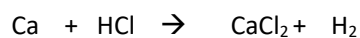
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3. Explain why, in terms of sub atomic particles, Lithium has a mass number of 7.

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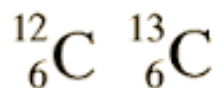
4. Balance the equations below:



5. Complete the table below:

Compound formula	Number of elements contained in the compound	Number of atoms in the compound
NH ₃		
CaCO ₃		
Na ₂ S ₂ O ₃		

6. Compare the two isotopes of carbon shown:



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7. Magnesium has 3 isotopes. 79% is of mass number 24, 10 % of mass 25 and the rest is mass number 26. Calculate the RAM of Mg. Give your answer to 3 significant figures.

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Extend

9. Explain why an atom of sodium is neutral overall, but a sodium ion has a charge of +1

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