

Year 11 Chemistry Test

Formulae and Balancing

NAME _____

1. Write down the symbols and charges for the following ions:

- | | |
|------------------|------------------|
| a) Magnesium ion | b) Iodide ion |
| c) Carbonate ion | d) Phosphate ion |
| e) Nitride ion | f) Zinc ion |
| g) Copper ion | h) Silver ion |

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2. Write correct chemical formulae for the following compounds:

- | | |
|-----------------------|-----------------------|
| a) Sodium nitrate | b) Zinc bicarbonate |
| c) Aluminium sulfide | d) Lead (IV) sulfate |
| e) Copper bromide | f) Ammonium hydroxide |
| g) Potassium chloride | h) Chromium phosphate |

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3. State how many:

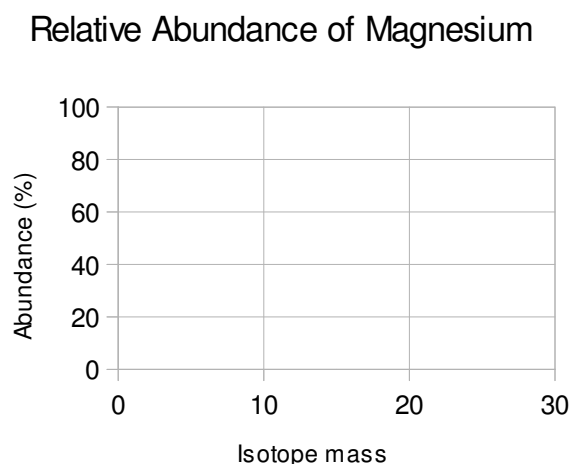
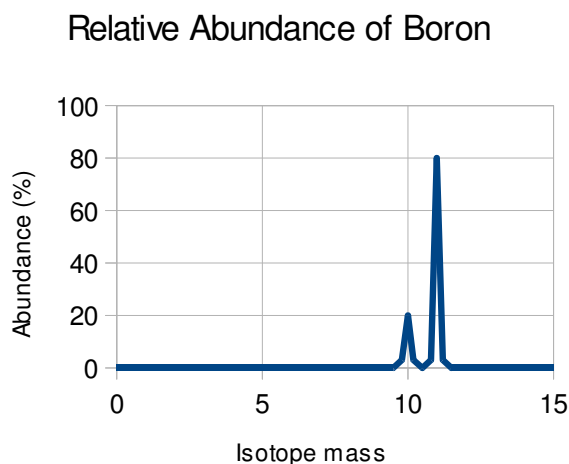
- Electrons in a neutral carbon atom
- Protons in a chloride ion
- Electrons in a sodium ion
- Neutrons in an isotope of carbon that has atomic mass 12

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4.

The element boron (atomic mass 10.81) is found naturally as two isotopes: ^{10}B and ^{11}B , where the superscript represents the mass of that isotope.

Mass spectrometry shows the natural abundance of boron is 20% ^{10}B and 80% ^{11}B , represented as peaks on the graph below:



Magnesium exists naturally as isotopes ^{24}Mg , ^{25}Mg , and ^{26}Mg .

Use a periodic table to estimate the relative abundance of magnesium by drawing it on the graph above.

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MORE QUESTIONS ON OTHER SIDE

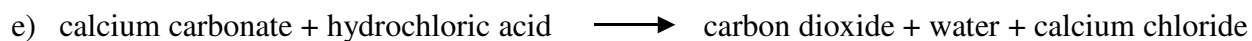
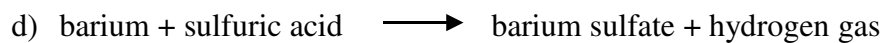
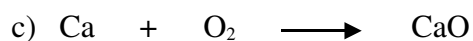
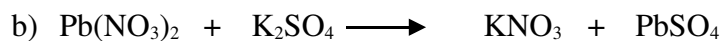
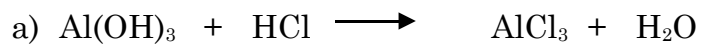
5. Write the electron configurations for the following:

a) Oxygen

b) Calcium ion

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6. Balance the following equations (rewrite the word equations as formula equations):



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TOTAL /28