AQA AS Chemistry-Taster lesson Sheet 1 ANSWERS

Beaumont Chemistry

Moles Calculations- Easy

- The Mass of 1 mole (in grams) is equal to the numerical value of the average atomic mass (get from periodic table).

1 Calculate the number of moles in the following.
- **(a)** 32 g of O_2
- **(b)** 11.5 g of Na
- **(c)** 36 g of Mg
- **(d)** 71 g of Cl_2

2 Calculate the mass of the following.
- **(a)** 2 mol of O_2
- **(b)** 0.5 mol of Mg
- **(c)** 2 mol of N_2
- **(d)** 1.5 mol of Ne

3 Calculate the relative atomic mass of each of the following.
- **(a)** 0.1 mol of a metal has a mass of 2.3 g
- **(b)** 0.25 mol of a metal has a mass of 10 g
- **(c)** 0.6 mol of a metal has a mass of 14.4 g

4 Calculate the relative molecular mass of each of the following.
- **(a)** 0.1 mol of a compound has a mass of 4.4 g
- **(b)** 0.1 mol of a compound has a mass of 3.2 g
- **(c)** 0.05 mol of a compound has a mass of 3.2 g

Moles Calculations- Not so easy!

For each of the following, formulate and balance equations first before calculating masses.

5 What mass of iron (III) oxide would be made by reacting 50g of iron with oxygen?

6 What mass of sulphur needs to be burnt in oxygen to produce 5g of sulphur dioxide?

7 What mass of calcium oxide and carbon dioxide would be made by heating 2g of calcium carbonate?

8 What mass of hydrogen would be produced by adding 10g of calcium to water?

9 What mass of oxygen would need to be added to 0.5g of carbon to turn it all into carbon dioxide?

Answers to Questions

1 **(a)** 1
(b) 0.5
(c) 1.5
(d) 1

2 **(a)** 64 g
(b) 12 g
(c) 56 g
(d) 30 g

3 **(a)** 23
(b) 40
(c) 24

4 **(a)** 44
(b) 32
(c) 64

5 71.52g
6 2.496g
7 1.12g, 0.88g
8 0.5g
9 0.73g