CALCULATING EMPIRICAL FORMULA

You will need to refer to a periodic table to find values for relative atomic masses of the elements. Use the data presented in each question to calculate the empirical formula for each of the compounds. The first one has been completed for you as an example.

1.   A compound which contains 11.6% nitrogen and 88.4% chlorine.

List the elements present:	N	Cl
What is the % or mass?	<u>11.6</u>	<u>88.4</u>
Divide by the A_r of each element	14	35.5
This gives a ratio between the elements	= <u>0.8286</u>	= <u>2.4901</u>
Divide by the smallest number	0.8286	0.8286
Simplest whole number ratio is	1	3

So empirical formula is NCl_3

2.   A compound which contains 40% sulphur and 60% oxygen.

3.   A compound which contains 37.21% carbon, 7.75% hydrogen and 55.04% chlorine.