Syllabus Links to Test 3

Chemistry ATAR: Note prior knowledge is expected and likely to be tested- as this list is not completely comprehensive and should be used as a guide

- the relative atomic mass (atomic weight), A_r is the ratio of the average mass of the atom to 1/12 the mass of an atom of ^{12}C; relative atomic masses of the elements are calculated from their isotopic composition
- mass spectrometry involves the ionisation of substances and the separation and detection of the resulting ions; the spectra which are generated can be analysed to determine the isotopic composition of elements and *__interpreted to determine relative atomic mass__*
- molecular formulae represent the number and type of atoms present in the molecules
- percentage composition of a compound can be calculated from the relative atomic masses of the elements in the compound and the formula of the compound
- chemical reactions can be represented by chemical equations; balanced chemical equations indicate the relative numbers of particles (atoms, molecules or ions) that are involved in the reaction
- the mole is a precisely defined quantity of matter equal to Avogadro's number of particles
- the mole concept relates mass, moles and molar mass and, with the Law of Conservation of Mass; can be used to calculate the masses of reactants and products in a chemical reaction

the mole concept can be used to calculate the mass of substances and volume of gases (at standard

- temperature and pressure) involved in a chemical reaction
- the behaviour of an ideal gas, including the qualitative relationships between pressure, temperature and volume, can be explained using the Kinetic Theory