ATAR Chemistry UNITS 1 & 2 2021 Sem 1 exam summary part 2 of 3

Unit Content	Pearson	study	review
Area of study 4: Chemical reactions and energy			
• the relative atomic mass (atomic weight), Ar 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	**9.1 / 9.3**		
• 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	**9.4**		
• the mole is a precisely defined quantity of matter equal to Avogadro's number of particles	**9.2**		
• the mole concept can be used to calculate moles and mass	**9.2**		
• 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	**9.2 / 9.3**		
• 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	**9.3**		
Area of study 3: Introducing organic chemistry			
• molecular structural formulae (condensed or showing bonds) can be used to show the arrangement of atoms and bonding in (organic) covalent molecular substances	**8.1 / 8.2 / 8.3**		
• IUPAC nomenclature is used to name straight and simple branched alkanes and alkenes from C_1-C_8	**8.1 / 8.2 / 8.3**		
• hydrocarbons, including alkanes and alkenes, have different chemical properties that are determined by the nature of the bonding within the molecules	**8.1 / 8.2 / 8.3**		
• benzne has different chemical properties that are determined by the nature of the bonding within the molecule	**8.3**		
• alkanes, alkenes and benzene undergo characteristic reactions such as combustion, addition reactions for alkenes and substitution reactions for alkanes and benzene	**8.4**		