Question	Answers	Mark	Additional Comments/Guidance
01.1	Enthalpy change or heat energy change when 1 mol of solid ionic compound/substance or 1 mol of ionic lattice is formed from its gaseous ions.	1 1	Allow: enthalpy change for: $M^+ (g) + X^- (g) \rightarrow MX (s)$ or $Ag^+ (g) + I^- (g) \rightarrow AgI (s)$ CE=0/2 if describing wrong process (eg ΔH of lattice dissociation or ΔH of formation/ or heat energy required) Ignore heat energy released
01.2	lattice dissociation energy= (112 + 464 + 293) = + 869 ($kJmol^{-1}$) lattice formation energy = − 869 ($kJ\ mol^{-1}$)	1 1	 (+)869 = 1 mark
01.3	AgI contains covalent character Forces/bonds (holding the lattice together) are stronger	1 1	CE=0/2 if atoms/molecules For M1, allow the following: not completely ionic / ions not spherical / ions distorted/ some covalent bonding Ignore covalent bonds stronger (than ionic bonds) Ignore electronegativity Ignore references to energy
01.4	$AgNO_3$ yellow ppt or Cl_2 or Br_2 brown solution/black ppt	1 1	Ignore ammonia/acidified/nitric acid/sulphuric acid M2 dependent on correct M1 but mark on from Ag^+ or Tollens
Total		**8**	