Solubility Rules for Common Ions in Aqueous Solution

	ANIONS	CATIONS	
1	essentially all	alkali ions (Li^{1+}, Na^{1+}, K^{1+}, Rb^{1+}, Cs^{1+}, Fr^{1+})	soluble
2	essentially all	hydrogen ion ($H^{1+}(aq)$)	soluble
3	essentially all	ammonium ion (NH_4^{1+})	soluble
4	nitrate, NO_3^{1-}	essentially all	soluble
5	acetate, CH_3COO^{1-}	essentially all	soluble
6	chloride, Cl^{1-} bromide, Br^{1-} iodide, I^{1-}	Ag^{1+}, Pb^{2+}, Hg_2^{2+}, Cu^{1+}	insoluble*
		all others	soluble
7	sulphate, SO_4^{2-}	Ca^{2+}, Sr^{2+}, Ba^{2+}, Pb^{2+}, Ra^{2+}, Ag^{1+}	insoluble
		all others	soluble
8	sulphide, S^{2-}	alkali ions**, $H^{1+}(aq)$, NH_4^{1+}, Be^{2+}, Mg^{2+}, Ca^{2+}, Sr^{2+}, Ba^{2+}, Ra^{2+}	soluble
		all others	insoluble
9	hydroxide, OH^{1-}	alkali ions, $H^{1+}(aq)$, NH_4^{1+} Sr^{2+}, Ba^{2+}, Ra^{2+}	soluble
		all others	insoluble
10	phosphate, PO_4^{3-} carbonate, CO_3^{2-} sulphite, SO_3^{2-}	alkali ions, $H^{1+}(aq)$, NH_4^{1+}	soluble
		all others	insoluble

insoluble* means low solubility and can involve lengthy calculations in grade twelve chemistry

alkali ions** are: Li^{1+}, Na^{1+}, K^{1+}, Rb^{1+}, Cs^{1+}, Fr^{1+}