

Solubility Rules

All common compounds of Group I and ammonium ions are soluble.

All nitrates, acetates, and chlorates are soluble.

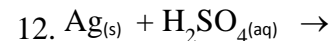
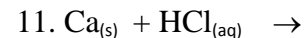
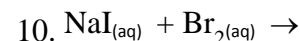
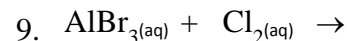
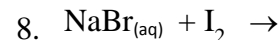
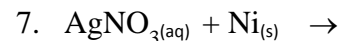
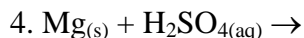
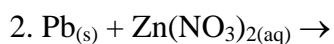
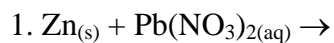
All binary compounds of the halogens (other than F) with metals are soluble, except those of Ag, Hg(I), and Pb. Pb halides are soluble in hot water.)

All sulfates are soluble, except those of barium, strontium, calcium, lead, silver, and mercury (I). The latter three are slightly soluble.

Except for rule 1, carbonates, hydroxides, oxides, silicates, and phosphates are insoluble.

Sulfides are insoluble except for calcium, barium, strontium, magnesium, sodium, potassium, and ammonium.

Predict the products of the following reactions:



STUDENT'S

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Activity Series of Metals

Each element on the list replaces from a compound any of the elements below it. The larger the interval between elements, the more vigorous the reaction. (Hydrogen included as a reference).

Element	Symbol
Potassium	K
Sodium	Na
Lithium	Li
Calcium	Ca
Magnesium	Mg
aluminium	Al
Carbon	C
Zinc	Zn
Iron	Fe
Nickel	Ni
Tin	Sn
Lead	Pb
Hydrogen	H
Copper	Cu
Silver	Ag
Gold	Au
Platinum	Pt

Nonmetals: Each element in the halogen series will replace any halide ion below it.

Element	Symbol
Fluorine	F
Chlorine	Cl
Bromine	Br
Iodine	I

Write balanced ionic and net ionic equations for each of the following reactions. Assume all reactions occur in aqueous solution.

