

Determining Correct Formulas for Ionic Compounds

First determine the charge on each ion from their placement on the periodic table. The charge on polyatomic ions and transition metal ions is given. Then determine the ratio of cation to anion necessary to make a neutral compound and write the proper formula.

	Cl	PO ₄ ³⁻	SO ₄ ²⁻	Br	N	NO ₃ ¹⁻	S	OH ¹⁻
NH ₄ ⁺								
Ca								
Al								
Mg								
K								
Ba								
Na								
Li								
Sr								
Rb								

Answers on the next page

Answers

	Cl^{1-}	PO_4^{3-}	SO_4^{2-}	Br^{1-}	N^{3-}	NO_3^{1-}	S^{2-}	OH^{1-}
NH_4^+	NH_4Cl	$(\text{NH}_4)_3\text{PO}_4$	$(\text{NH}_4)_2\text{SO}_4$	NH_4Br	$(\text{NH}_4)_3\text{N}$	NH_4NO_3	$(\text{NH}_4)_2\text{S}$	NH_4OH
Ca^{2+}	CaCl_2	$\text{Ca}_3(\text{PO}_4)_2$	CaSO_4	CaBr_2	Ca_3N_2	$\text{Ca}(\text{NO}_3)_2$	CaS	$\text{Ca}(\text{OH})_2$
Al^{3+}	AlCl_3	AlPO_4	$\text{Al}_2(\text{SO}_4)_3$	AlBr_3	AlN	$\text{Al}(\text{NO}_3)_3$	Al_2S_3	$\text{Al}(\text{OH})_3$
Mg^{2+}	MgCl_2	$\text{Mg}_3(\text{PO}_4)_2$	MgSO_4	MgBr_2	Mg_3N_2	$\text{Mg}(\text{NO}_3)_2$	MgS	$\text{Mg}(\text{OH})_2$
K^+	KCl	K_3PO_4	K_2SO_4	KBr	K_3N	KNO_3	K_2S	KOH
Ba^{2+}	BaCl_2	$\text{Ba}_3(\text{PO}_4)_2$	BaSO_4	BaBr_2	Ba_3N_2	$\text{Ba}(\text{NO}_3)_2$	BaS	$\text{Ba}(\text{OH})_2$
Na^+	NaCl	Na_3PO_4	Na_2SO_4	NaBr	Na_3N	NaNO_3	Na_2S	NaOH
Li^+	LiCl	Li_3PO_4	Li_2SO_4	LiBr	Li_3N	LiNO_3	Li_2S	LiOH
Sr^{2+}	SrCl_2	$\text{Sr}_3(\text{PO}_4)_2$	SrSO_4	SrBr_2	Sr_3N_2	$\text{Sr}(\text{NO}_3)_2$	SrS	$\text{Sr}(\text{OH})_2$
Rb^+	RbCl	Rb_3PO_4	Rb_2SO_4	RbBr	Rb_3N	RbNO_3	Rb_2S	RbOH