

The criss-cross method of balancing charge!

Ionic compound formulas must contain the fewest number of ions that “balance” out positive and negative charge (the same amount of each). The “criss-cross” method is one way of writing the formulas properly. The formula for ionic compounds is called a “formula unit.”

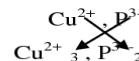
1. Write symbols and charges of ions.

2. Crisscross:

The cation charge becomes the anion subscript
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3. Clean up format for final answer

- do NOT write ionic charges
- reduce subscripts to lowest ratio
- do NOT write the subscript “1”



Use the criss-cross method to write formula units for these ionic compounds (2 examples are done for you)

	Cl ⁻	O ²⁻	P ³⁻	S ²⁻
Na ⁺	NaCl	Na ₂ O	Na ₃ P	Na ₂ S
K ⁺	KCl	K ₂ O	K ₃ P	K ₂ S
Ba ²⁺	BaCl ₂	BaO	Ba ₃ P ₂	BaS
Fe ²⁺	FeCl ₂	FeO	Fe ₃ P ₂	FeS
Cr ³⁺	CrCl ₃	Cr ₂ O ₃	CrP	Cr ₂ S ₃
Li ⁺	LiCl	Li ₂ O	Li ₃ P	Li ₂ S
Mg ²⁺	MgCl ₂	MgO	Mg ₃ P ₂	MgS
Al ³⁺	AlCl ₃	Al ₂ O ₃	AlP	Al ₂ S ₃
Ga ³⁺	GaCl ₃	Ga ₂ O ₃	GaP	Ga ₂ S ₃
Sn ²⁺	SnCl ₂	SnO	Sn ₃ P ₂	SnS
Ca ²⁺	CaCl ₂	CaO	Ca ₃ P ₂	CaS