

gridlocks – can you unlock the grid?

Ionic Formulae 1

Before you answer the gridlocks below fill in the table of formulae:

Cation	Chloride	Sulfate	Hydroxide	Nitrate
sodium	NaCl	Na ₂ SO ₄		NaNO ₃
calcium		CaSO ₄	Ca(OH) ₂	
aluminium				Al(NO ₃) ₃
hydrogen		H ₂ SO ₄		
magnesium	MgCl ₂			
silver (i)			AgOH	
potassium		K ₂ SO ₄		
copper(II)			Cu(OH) ₂	
iron (III)				Fe(NO ₃) ₃
iron (II)		FeSO ₄		
ammonium	NH ₄ Cl			NH ₄ NO ₃

Gridlock 1

Each row, column and 2 x 2 box contains a chloride, sulfate, hydroxide and nitrate. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

calcium compound		sodium compound	
CaSO ₄			NaCl
	Al(OH) ₃		HNO ₃
aluminium compound		hydrogen compound	

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Gridlock 2

magnesium compounds		potassium compounds	
MgCl ₂			KNO ₃
	Mg(NO ₃) ₂	KCl	
	Al(OH) ₃		
		Ag ₂ SO ₄	
aluminium compounds		silver (i) compounds	

Gridlock 3

copper (II) compounds		ammonium compounds	
CuSO ₄			
		NH ₄ NO ₃	
		FeCl ₂	
	Fe(OH) ₃		
iron (III) compounds		iron (II) compounds	