

Naming complexes - ligands

Before you answer the puzzles below fill in the table of ligands using:

hydride hydroxide cyanide aqua CO thio

Ligand	Formula	Name in complex	Ligand	Formula	Name in complex
water	H ₂ O			CN ⁻	cyano
chloride	Cl ⁻	chloro	fluoride	F ⁻	fluoro
bromide	Br ⁻	bromo		H ⁻	hydrido
iodide	I ⁻	iodo	carbon monoxide		carbonyl
	OH ⁻	hydroxy	oxide	O ²⁻	oxo
ammonia	NH ₃	ammino	sulfide	S ²⁻	

Gridlock 1

Each row, column and 2 x 2 box contains information about the first four ligands listed above. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

ligand		name in complex	
chloride			
		iodo	
		H ₂ O	
	bromo		
name in complex		formula	

gridlocks – can you unlock the grid?

Gridlock 2

Each row, column and 2 x 2 box contains information about each of the ligands: hydroxide, fluoride, ammonia and cyanide.

ligand		name in complex	
	hydroxide		fluoro
			hydroxy
ammino			CN ⁻
name in complex		formula	

Gridlock 3

Each row, column and 2 x 2 box contains information about each of the ligands: carbon monoxide, hydride, sulfide and oxide.

ligand		name in complex	
carbon monoxide			hydrido
			S ²⁻
oxo			
name in complex		formula	