

Naming complexes: metals

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

Sn cobaltate zinc vanadate manganate uranium Cr

Metal	Symbol	Name in anionic complexes	Metal	Symbol	Name in anionic complexes
chromium		chromate	silver	Ag	argenate
cobalt	Co		vanadium	V	
copper	Cu	cuprate	aluminium	Al	aluminate
iron	Fe	ferrate		U	uranate
manganese	Mn			Zn	zincate
nickel	Ni	nickelate	tin		stannate

Gridlock 1

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

metal		name in anionic complexes	
cobalt			
		ferrate	
		Cr	
	cuprate		
name in anionic complexes		symbol	

gridlocks – can you unlock the grid?

Gridlock 2

Each row, column and 2 x 2 box contains information about each of the metals: manganese nickel silver vanadium.

metal		name in anionic complexes	
	manganese		vanadate
			manganate
nickelate			Ag
name in anionic complexes		symbol	

Gridlock 3

Each row, column and 2 x 2 box contains information about each of the metals: uranium, zinc, tin and aluminium.

metal		name in anionic complexes	
uranium			aluminate
			Sn
zincate			
name in anionic complexes		symbol	

Naming complexes: metals – answers

metal	symbol	name in anionic complexes	metal	symbol	name in anionic complexes
chromium	Cr	chromate	silver	Ag	argenate
cobalt	Co	cobaltate	vanadium	V	vanadate
copper	Cu	cuprate	aluminium	Al	aluminate
iron	Fe	ferrate	uranium	U	uranate
manganese	Mn	manganate	zinc	Zn	zincate
nickel	Ni	nickelate	tin	Sn	stannate

Gridlock 1 – answers

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

metal		name in anionic complexes	
cobalt	iron	cuprate	chromate
copper	chromium	ferrate	cobaltate
ferrate	cobaltate	Cr	Cu
chromate	cuprate	Co	Fe
name in anionic complexes		symbol	

gridlocks – can you unlock the grid?

Gridlock 2 – answers

metal		name in anionic complexes	
silver	manganese	nickelate	vanadate
vanadium	nickel	argenate	manganate
manganate	argenate	V	Ni
nickelate	vanadate	Mn	Ag
name in anionic complexes		symbol	

Gridlock 3 – answers

metal		name in anionic complexes	
uranium	zinc	stannate	aluminate
tin	aluminium	uranate	zincate
aluminate	uranate	Zn	Sn
zincate	stannate	Al	U
name in anionic complexes		symbol	