

gridlocks – can you unlock the grid?

Alkalis 2

Before you answer the puzzles below fill in the table about alkalis using:

	BaSO_4	LiCl	potassium hydroxide	Ca(OH)_2
Alkali	Formula		Salt formed with H_2SO_4	Salt formed with HCl
sodium hydroxide	NaOH		Na_2SO_4	NaCl
calcium hydroxide			CaSO_4	CaCl_2
	KOH		K_2SO_4	KCl
lithium hydroxide	LiOH		Li_2SO_4	
ammonium hydroxide	NH_4OH		$(\text{NH}_4)_2\text{SO}_4$	NH_4Cl
barium hydroxide	Ba(OH)_2			BaCl_2

Gridlock 1

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

name		salt formed with sulfuric acid	
calcium hydroxide			Na_2SO_4
			LiOH
K_2SO_4			
salt formed with sulfuric acid		formula	

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Gridlock 2

Each row, column and 2 x 2 box contains information about potassium hydroxide, lithium hydroxide, ammonium hydroxide and barium hydroxide.

name		salt formed with hydrochloric acid	
barium hydroxide			NH ₄ Cl
	KCl		LiOH
salt formed with hydrochloric acid		formula	

Gridlock 3

You will need to work out which four alkalis are used in this puzzle.

name		salt formed with hydrochloric acid	
	sodium hydroxide		NH ₄ Cl
			NaCl
BaSO ₄			KOH
salt formed with sulfuric acid		formula	