

# gridlocks – can you unlock the grid?

## Alkalis and salts

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

sodium chloride	potassium sulfate	Lithium hydroxide	calcium chloride
Alkali	Salt formed with hydrochloric acid	Salt formed with sulphuric acid	
sodium hydroxide		sodium sulfate	
calcium hydroxide		calcium sulfate	
potassium hydroxide	potassium chloride		
	lithium chloride	lithium sulfate	

### Gridlock 1

Each row, column and 2 x 2 box contains either each of the four alkalis or the salt they form with sulphuric acid. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

name		salt formed with sulfuric acid	
sodium hydroxide			lithium sulfate
	Lithium hydroxide		
			sodium hydroxide
		calcium hydroxide	
salt formed with sulfuric acid		name	

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## Gridlock 2

Each row column and 2x2 box contains either each of the four alkalis or the salt they form with hydrochloric acid.

name		salt formed with hydrochloric acid	
calcium hydroxide			
		lithium chloride	
		sodium hydroxide	
	potassium chloride		
salt formed with hydrochloric acid		name	

## Gridlock 3

name		salt formed with hydrochloric acid	
	sodium hydroxide		lithium chloride
			sodium chloride
calcium sulfate			potassium hydroxide
salt formed with sulfuric acid		name	