

# Alkalis and salts

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

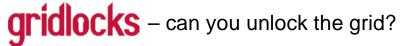
sodium chloride po	otassium sulfate – lithium hyd	lroxide calcium chloride
Alkali	Salt formed with hydrochloric acid	Salt formed with sulfuric acid
sodium hydroxide		sodium sulfate
calcium hydroxide		calcium sulfate
potassium hydroxide	potassium chloride	
	lithium chloride	lithium sulfate

## Gridlock 1

Each row, column and 2 x 2 box contains each of the four alkalis or the salt they form with sulfuric 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		na	me





# **Gridlock 2**

Each row, column and 2 x 2 box contains 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		na	me

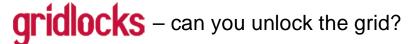
#### **Gridlock 3**

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

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







# Alkalis and salts - answers

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

sodium chloride potassium sulfate lithium hydroxide calcium chloride

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

#### Puzzle 1

Each row, column and 2 x 2 box contains each of the four alkalis or the salt they form with sulfuric 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	calcium hydroxide	potassium sulfate	lithium sulfate
potassium hydroxide	lithium hydroxide	sodium sulfate	calcium sulfate
calcium sulfate	potassium sulfate	lithium hydroxide	sodium hydroxide
lithium sulfate	sodium sulfate	calcium hydroxide	potassium hydroxide
salt formed with sulfuric acid		na	me





# gridlocks – can you unlock the grid?

## Puzzle 2

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

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

## Puzzle 3

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

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



