

gridlocks – can you unlock the grid?

Acids and salts

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

sodium nitrate	potassium sulfate	hydrochloric acid	sodium ethanoate
Acid	Salt formed with potassium hydroxide	Salt formed with sodium hydroxide	
	potassium chloride	sodium chloride	
sulfuric acid		sodium sulfate	
nitric acid	potassium nitrate		
ethanoic acid	potassium ethanoate		

Gridlock 1

Each row, column and 2 x 2 box contains a reference to each of the four acids or the salt they form with sodium hydroxide. Use your problem solving skills and the table above to fill in the blank boxes.

name		salt formed with sodium hydroxide	
	hydrochloric acid		sodium ethanoate
			sodium chloride
sodium sulfate			nitric acid
salt formed with sodium hydroxide		name	

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Gridlock 2

Each row, column and 2 x 2 box contains a reference to each of the four acids or the salt they form with potassium hydroxide.

name		salt formed with potassium hydroxide	
sulfuric acid			potassium chloride
			ethanoic acid
potassium nitrate			
salt formed with potassium hydroxide		name	

Gridlock 3

Each row, column and 2 x 2 box contains a reference to each of the four acids or the salt they form with potassium hydroxide and sodium hydroxide.

name		salt formed with potassium hydroxide	
sulfuric acid			
		potassium ethanoate	
		hydrochloric acid	
	sodium nitrate		
salt formed with sodium hydroxide		name	

Acids and salts – answers

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

Acid	Salt formed with potassium hydroxide	Salt formed with sodium hydroxide
hydrochloric acid	potassium chloride	sodium chloride
sulfuric acid	potassium sulfate	sodium sulfate
nitric acid	potassium nitrate	sodium nitrate
ethanoic acid	potassium ethanoate	sodium ethanoate

Puzzle 1

Each row, column and 2 x 2 box contains a reference to each of the four acids or the salt they form with sodium hydroxide. Use your problem solving skills and the table above to fill in the blank boxes.

name		salt formed with sodium hydroxide	
nitric acid	hydrochloric acid	sodium sulfate	sodium ethanoate
ethanoic acid	sulfuric acid	sodium nitrate	sodium chloride
sodium chloride	sodium nitrate	ethanoic acid	sulfuric acid
sodium sulfate	sodium ethanoate	hydrochloric acid	nitric acid
salt formed with sodium hydroxide		name	

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Puzzle 2

Each row, column and 2 x 2 box contains a reference to each of the four acids or the salt they form with potassium hydroxide.

name		salt formed with potassium hydroxide	
sulfuric acid	nitric acid	potassium ethanoate	potassium chloride
ethanoic acid	hydrochloric acid	potassium sulfate	potassium nitrate
potassium chloride	potassium sulfate	nitric acid	ethanoic acid
potassium nitrate	potassium ethanoate	hydrochloric acid	sulfuric acid
salt formed with potassium hydroxide		name	

Puzzle 3

Each row, column and 2 x 2 box contains a reference to each of the four acids or the salt they form with potassium hydroxide and sodium hydroxide.

name		salt formed with potassium hydroxide	
sulfuric acid	ethanoic acid	potassium nitrate	potassium chloride
nitric acid	hydrochloric acid	potassium ethanoate	potassium sulfate
sodium ethanoate	sodium sulfate	hydrochloric acid	nitric acid
sodium chloride	sodium nitrate	sulfuric acid	ethanoic acid
salt formed with sodium hydroxide		name	