

# gridlocks – can you unlock the grid?

## Iron and Steel

Before you answer the puzzles below fill in the table of iron and steel alloys using:

malleable	cast iron	iron with 1% carbon	resists corrosion
metal	composition		properties
wrought iron	iron with very little carbon		soft and malleable
	iron with 4% carbon		brittle and hard
low-carbon steel	iron with 0.2% carbon		
high-carbon steel			hard
stainless steel	iron with chromium and nickel		

### Gridlock 1

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

metal		composition	
	wrought iron		iron with 1% carbon
			iron with very little carbon
iron with 4% carbon			low-carbon steel
composition		metal	

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## Gridlock 2

Each row, column and 2 x 2 box contains information about cast iron, low carbon steel, high carbon steel and stainless steel.

metal		composition	
low-carbon steel			iron with 4% carbon
			resists corrosion
iron with 1% carbon			
composition		properties	

## Gridlock 3

Each row, column and 2 x 2 box contains information about cast iron, low carbon steel, high carbon steel and stainless steel.

metal		properties	
low-carbon steel			brittle and hard
	hard		iron with chromium and nickel

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properties

composition