MAYOR OF LONDON



Colour By Number Pixel Puzzle Picture: Roman Mosaic

Pictures can be stored in a computer as a grid of numbers. Each number gives the colour of that small area or **pixel**. This is also the way digital images are stored and represented on a screen.

The Romans had the same idea when creating mosaics to decorate their floors. They created designs using lots of small coloured stones or pieces of glass cut into squares. They called them **tesserae** but the idea is the same as pixels. Some were designed in Rome with kits or pattern books sent to the far flung reaches of the empire (like Britain) to be recreated in the villas there. Its not clear what form pattern books took. Modern computers send a pattern from one place to another as a list of numbers. The numbers can be created on a display at the destination.

Recreate this classic roman design by colouring each **pixel** as given by its number. Look up the colour for each number in the key. For example, colour pixels marked 0 in black, and pixels marked 1 in red.

2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	KEY	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
2	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	2	1	
2	0	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0	0	2	2	
2	0	0	0	0	0	0	1	2	0	0	0	2	1	0	0	0	0	0	0	2		1
2	0	0	0	0	0	0	1	2	0	2	0	2	1	0	0	0	0	0	0	2		
2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	2		
2	0	1	1	1	1	0	1	2	0	1	1	1	1	1	1	1	1	1	0	2		
2	0	1	2	2	2	0	1	2	0	2	2	2	2	2	2	2	2	1	0	2		
2	0	1	2	0	0	0	1	2	0	0	0	0	0	0	0	0	2	1	0	2		
2	0	1	2	0	2	0	1	2	0	2	0	2	1	0	2	0	2	1	0	2		
2	0	1	2	0	0	0	0	0	0	0	0	2	1	0	0	0	2	1	0	2		
2	0	1	2	2	2	2	2	2	2	2	0	2	1	0	2	2	2	1	0	2		
2	0	1	1	1	1	1	1	1	1	1	0	2	1	0	1	1	1	1	0	2		
2	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	2		
2	0	0	0	0	0	0	1	2	0	2	0	2	1	0	0	0	0	0	0	2		
2	0	0	0	0	0	0	1	2	0	0	0	2	1	0	0	0	0	0	0	2		
2	0	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0	0	2		
2	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	2		
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		

Why not create your own Roman-style pixel puzzle mosaic?

Computer Science activities with a sense of fun: Pixel Puzzle Pictures 5S V1.0 29 Oct 2016) Created by Paul Curzon, Queen Mary University of London with support from the Mayor of London for Teaching London Computing: <u>http://teachinglondoncomputing.org</u>

