

# The difference between VECTORS & PIXELS

VECTOR information is used to describe a path or shape and how it is coloured.

VECTOR information is saved from software such as CorelDraw, Adobe Illustrator and Macromedia Freehand. VECTOR information will give optimum print resolution however large you scale it up.


Zoom in on the symbol below and compare with the same shape (a BITMAP version) on the right. One is clearly better defined.

PIXEL files are bitmap filetypes such as TIFF, JPEG & GIF. There are many others.

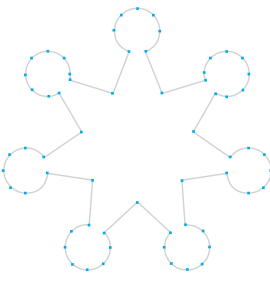
These filetypes contain coloured pixels, the pixels make up the picture or shape when seen together. The more pixels in a file, the larger the file becomes.


A digital photograph is a PIXEL file. These are usually Compressed and saved as RGB JPEGs. Ideally JPEG PIXEL files should not be compressed more than the Medium setting, and for best results, do not compress at all. The PIXEL information available before compression can never be restored.

Resolution in the context of PIXEL filetypes, refers to how many PIXELS there are in the file. It is most commonly measured in Dots Per Inch, or dpi for short. Note that it is describing 72 dots in a line rather than an area made up of 72 dots.



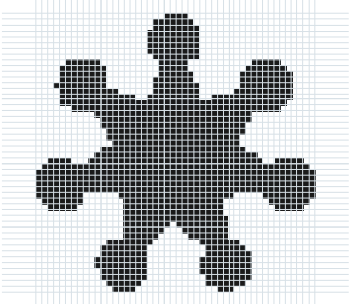
**VECTOR**  
(has unlimited resolution potential, made up of 'nodes' describing the shape)





**BITMAP**  
(this example is 72 dots per inch (dpi))


72 across x 72 down pixels = 5184 in every inch squared



\* Here are 72 pixels in a line from our sample image of 300dpi below. It's not worth counting them, trust me.


See below for differences that JPEG compression (as well as resolution) makes to a PIXEL file.

1inch




**VECTOR**  
shapes  
unlimited dpi  
133kb file size


\*




**PIXEL**  
300dpi  
192kb file size



**PIXEL**  
300dpi  
JPEG  
Compression  
medium  
100kb file size



**PIXEL**  
72dpi  
66kb file size



**PIXEL**  
72dpi  
JPEG  
Compression  
low  
60kb file size