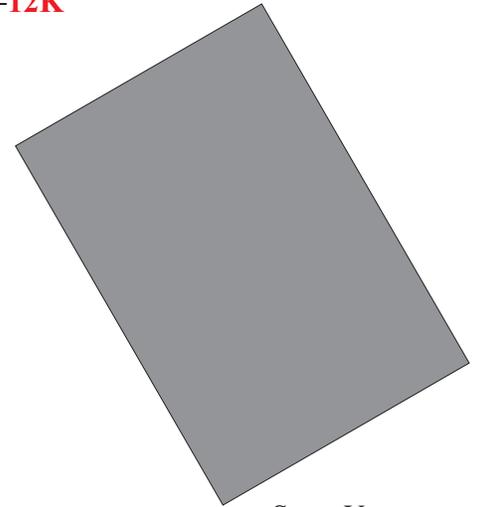# VECTOR vs BITMAP IMAGES

VECTOR 2" BY 3" SQUARE =12K

Vectors are made in programs
like Corel Draw, Illustator and
FreeHand. Vectors work on
points in space. The computer
stores only the points and the
information it needs to redraw the
square and the color to fill it.
If I had made this image size of a
billboard it would still be the
same file size.

Same Vector
square rotated
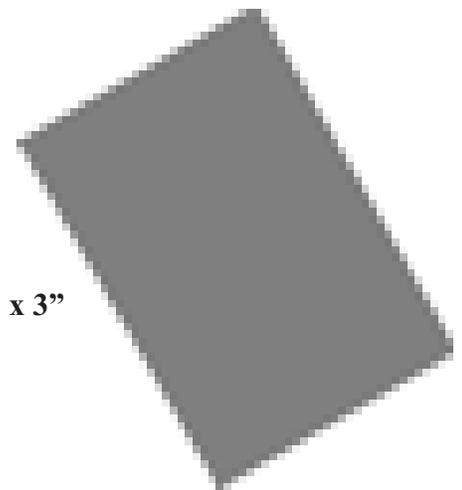30 degrees and
reduced in size
notice the straight
edges.

**BITMAP STORED IN RGB 2" by 3"=
180k at 100dpi**

Bitmaps are made in painting
programs like Painter, Photoshop
and Photopaint. Any image that is
scanned or made with a digital camera
is a bitmap. The computer has to
store the color information
for every pixel. So every pixel
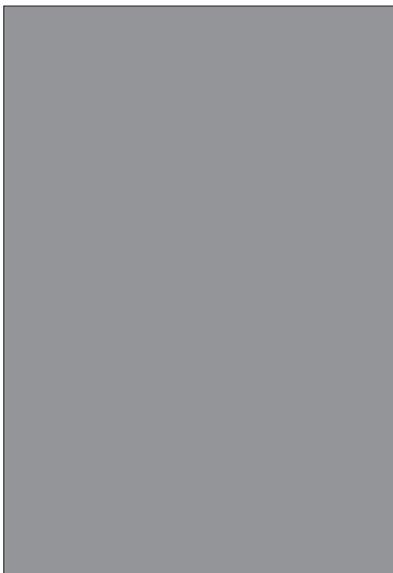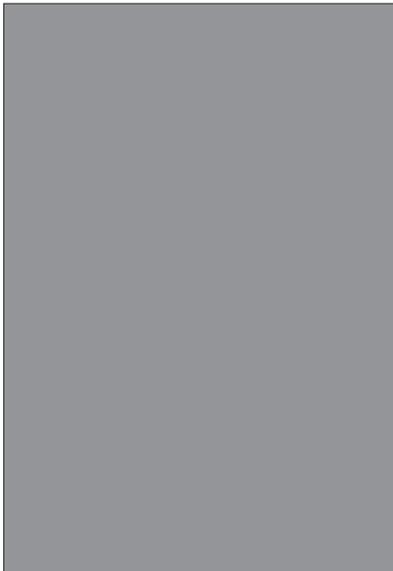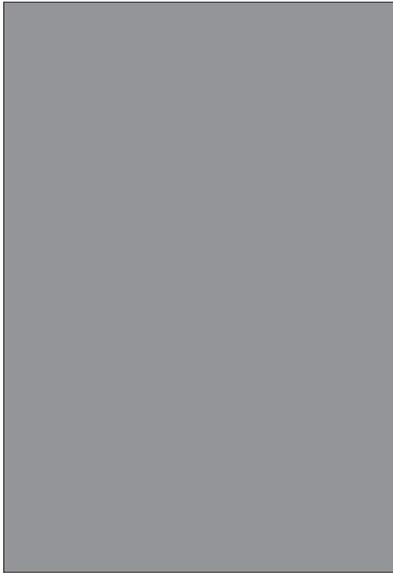you add to the image you increase
the file size.

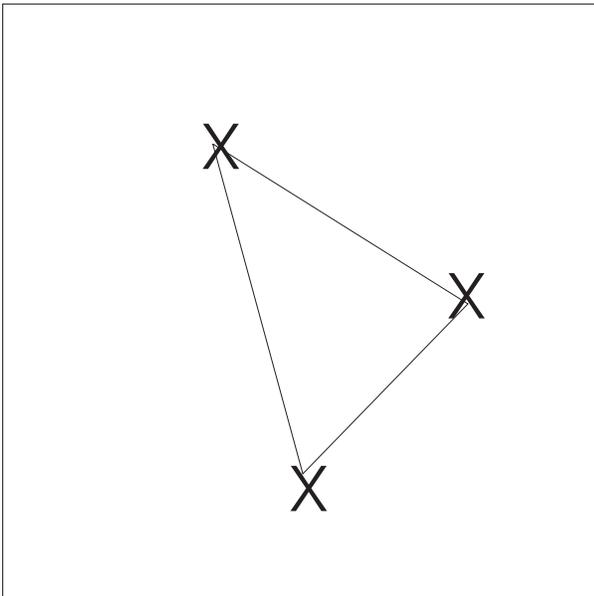**BITMAP STORED IN CMYK 2" x 3"
=240K at 100 dpi**

2" x 3" image @ 200 dpi = 940K
          @ 300 dpi = 2.1MB

8" x 10: image @ 300 dpi = 27.5MB

Bitmap square
rotated 30 degrees
is now a smaller
file size but
look at the
edges.

VECTOR 2" BY 3" SQUARE =12K

Vectors are made in programs like Illustator, Freehand and Corel Draw. Vectors programs records the x, y position of an object and all the color fill and line information in math functions. Vector objects can be printed at any size (the file size does not change and the lines are straight, no jags.
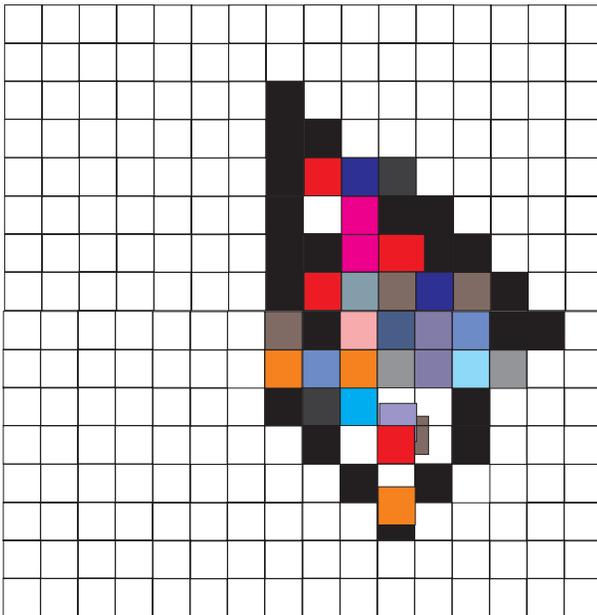
BITMAP STORED IN RGB 2" by 3"= 180k at 100dpi

Bitmaps are made in painting programs like Painter, Photoshop and Photopaint. The computer stores the color information depth for every pixel. When lines and edges printed there is a jagged edge. If you make the image larger by adding pixels the file will increase in size.

16 Pixels Square

To find the size of the bitmap image: X pixels (times) Y pixels (times) Color depth=file size

The size of the mega pixels in digital cameras is the x pixels times Y pixels of the collector plate.

Example: my DSLR shoots an image of 4368 pixels by 2962 which would equal 12,938,016 and is called a 12.8 megapixel camera. If you multiply 12.8 by 3 (RGB color space) you get a file size (uncompressed) of 38 mb. Or 38,814,048 bits