

Digital Image Basics

Pixels

The foundational building block of a digital image is the

“Picture Element”

or

“Pixel”



Images made up of pixels are called
Bitmaps

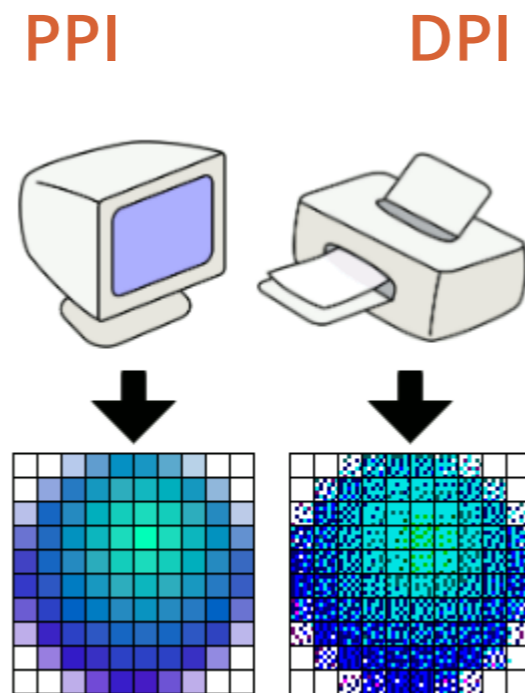
Resolution

A measurement of visual **"image quality"**
based on the **size** and **number** of pixels in an image



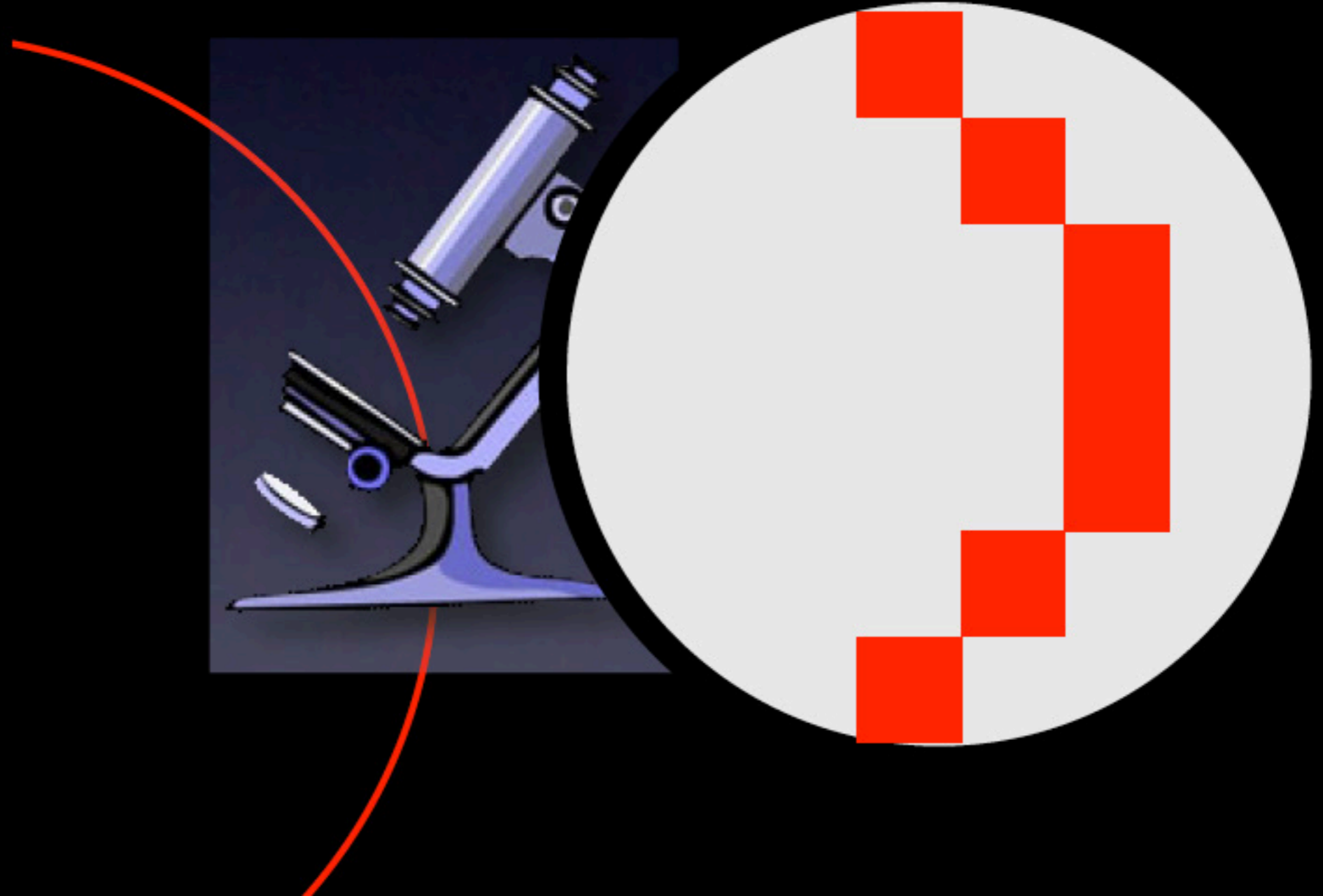
Resolution on the screen is measured in
PPI or **Pixels Per Inch**

Resolution at the time of printing occurs with
dots of ink, and is referred to as
DPI or **Dots Per Inch**



Diagonals and Curves

Because pixels are square,
diagonals and curves must be perceived through optical illusion



Diagonals and Curves

Two Remedies:

- Small-sized pixels
- Anti-aliasing



WITHOUT anti-aliasing

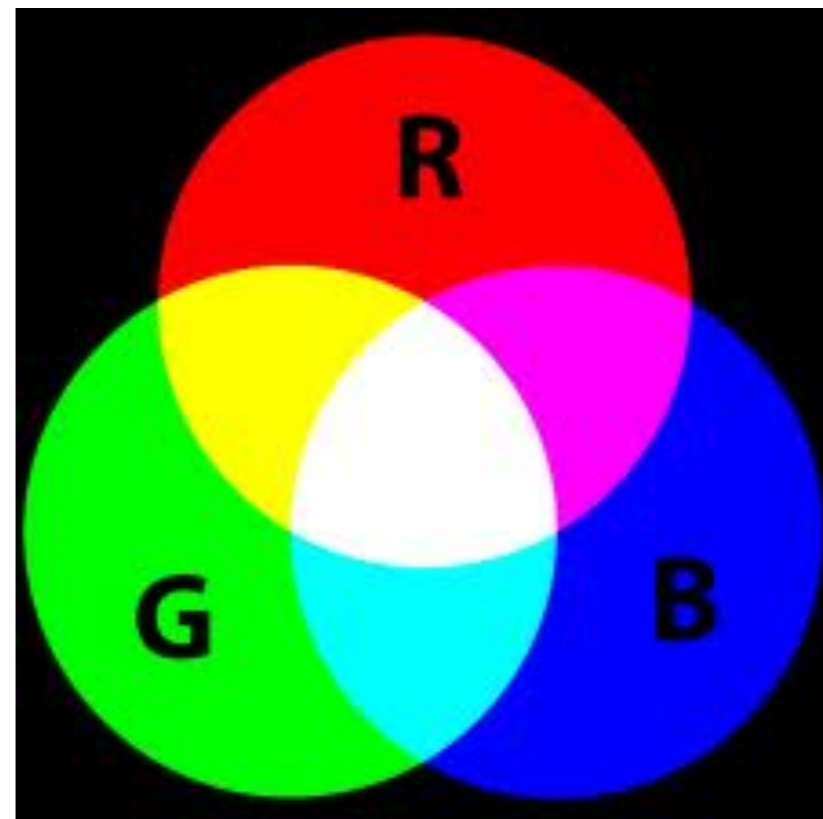
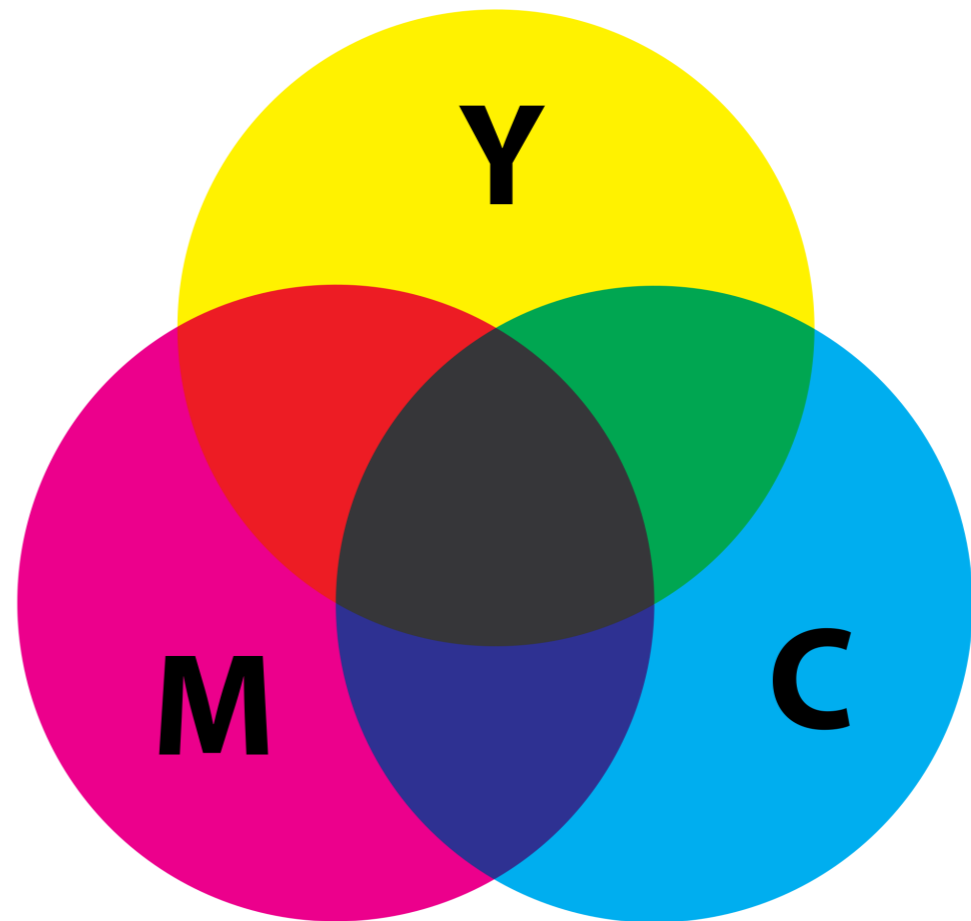


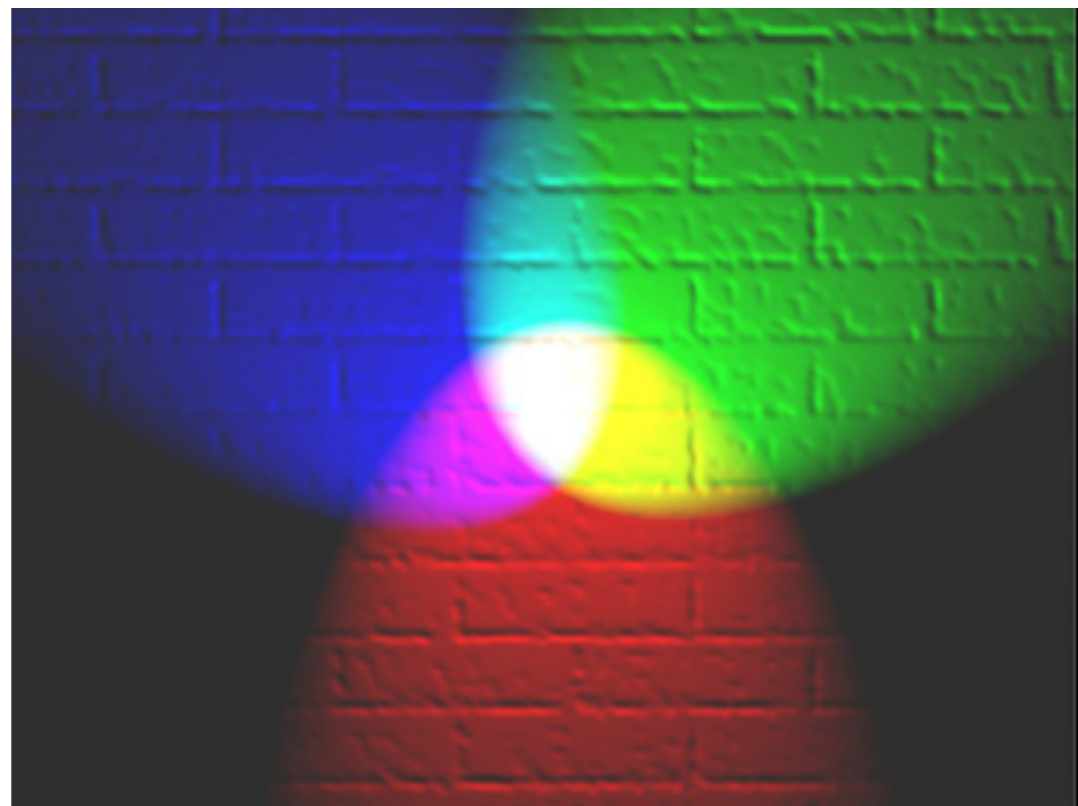
WITH anti-aliasing

Color

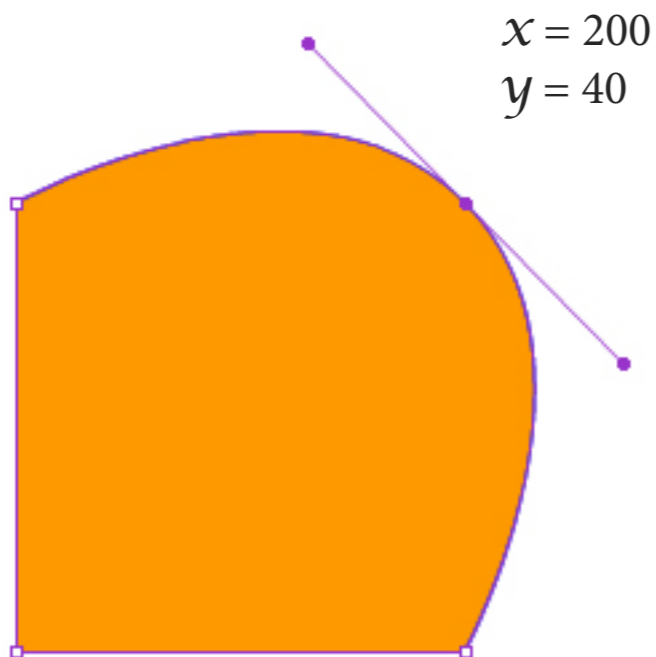
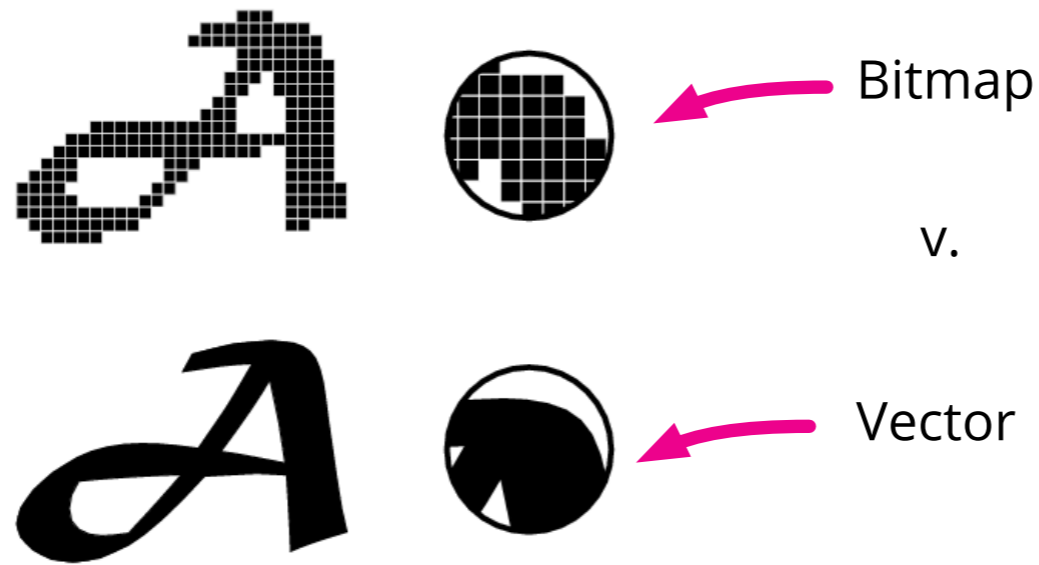
There are 2 color modes:

- CMYK
- RGB





Bitmap v. Vector



Vector graphics are made up of lines and curves defined by **mathematical information**.



Illustrator is best at creating vector graphics

Vector Graphics are Resolution-Independent



You can freely change the scale of vector graphics without losing detail or clarity, because they are resolution-independent.