Image file calculations

Images are stored as **bitmaps** - grids of individual pixels

A **pixel** is a single point in a graphical image - a picture element

Each pixel is encoded with data about the colour to create a **number**

The number of bits used for each colour is the **colour depth**

Image file calculations

The **image size in pixels** is the width times the height

image size = width x height

Image file calculations

The greater the **colour depth** the larger the file size

file size = width x height x colour depth

- Black and white = 1 bit colour depth
- 8 colours = 3 bit colour depth

Image file calculations

size in bits = width x height x colour depth

size in Bytes = (width x height x colour depth) /8

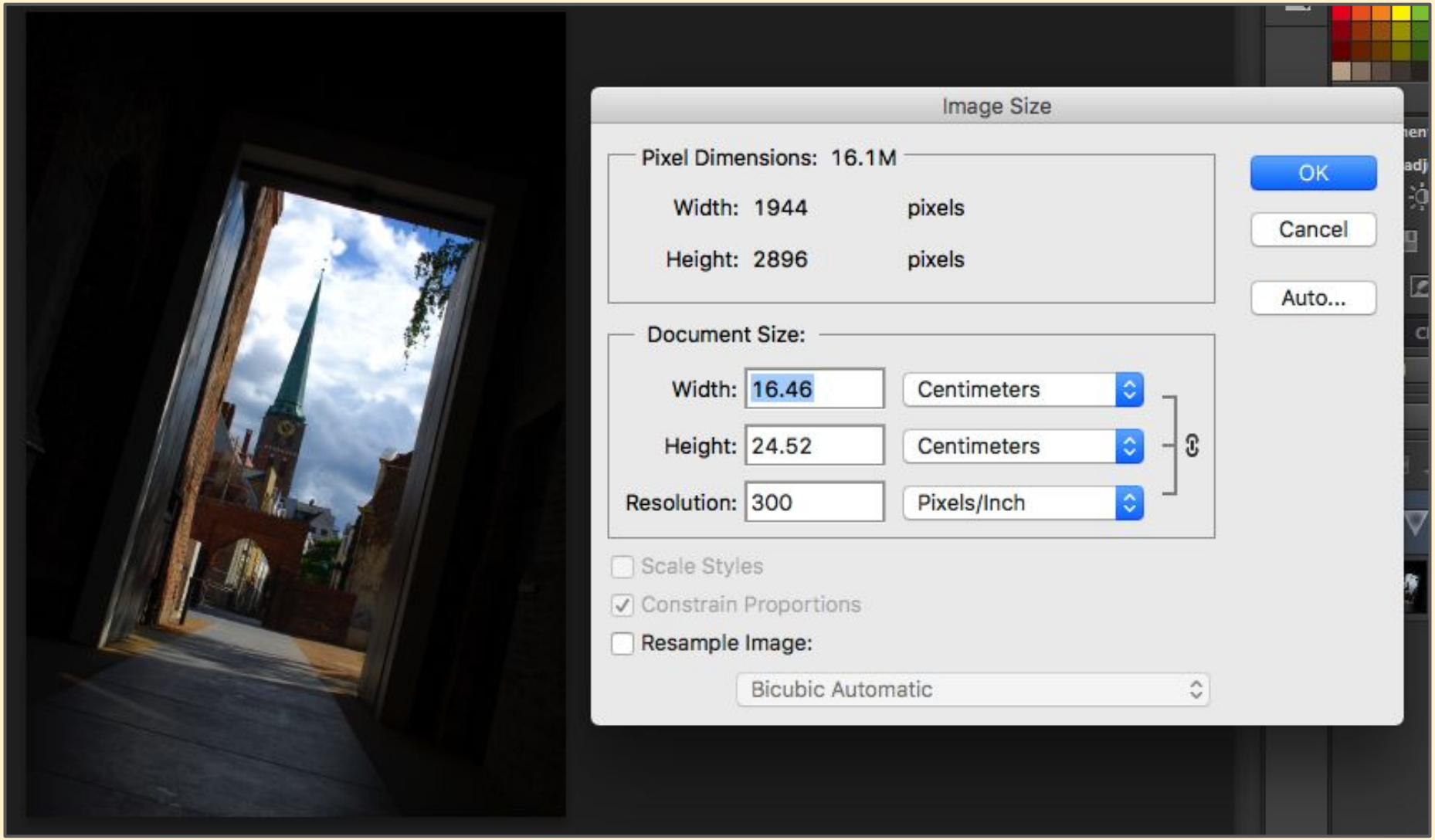

Image size in bits?

Colour depth is 24 bits per pixel (standard JPG)

Image file calculations

size in bits = width x height x colour depth

=

Image file calculations

size in bits = width x height x colour depth

= 1944 x 2896 x 24

=

Image file calculations

size in bits = width x height x colour depth

= 1944 x 2896 x 24

= 135,115,776 bits

Image file calculations

size in Bytes = (width x height x colour depth) /8

= 135,115,776 / 8

=

Image file calculations

size in Bytes = (width x height x colour depth) /8

= 135,115,776 / 8

= 16,889,472 Bytes

How many KiloBytes? MegaBytes? GigaBytes?