Resizing and Resampling Images Tutorial

Please choose any image and open it in Photoshop.
Difference Between Resizing and Resampling an Image in Photoshop

When changing the size of an image in Photoshop, there’s really two ways to go about it. You can either **resize** the image, or you can **resample** it. A lot of people use the terms resizing and resampling as if they mean the same thing, but they don’t, and there’s an important difference between the two.
Difference Between Resizing and Resampling an Image in Photoshop

The difference between resizing and resampling has to do with whether or not you’re changing the number of pixels in the image. If you’re keeping the number of pixels in the image the same and simply changing the size at which the image will print, that’s known as resizing. If, on the other hand, you are physically changing the number of pixels in the image, that’s called resampling.
Difference Between Resizing and Resampling an Image in Photoshop

Again, just to make sure we’re on the same page so far:

• **Image Resizing**: Changing the size the image will print without changing the number of pixels in the image.

• **Image Resampling**: Changing the number of pixels in the image.
Resizing vs. Resampling an Image

Make sure you have your image open in Photoshop and let’s look at what the Image Size dialog box is telling us about this image.

To access it, I’ll go up to the Image menu at the top of the screen and choose Image Size.

Image > Image Size
Resizing vs. Resampling an Image

*Pixel Dimension* tells us the width and height of our image in pixels, and the file size of our image.

*Document Size* tells us how large or small our image is going to print based on the image resolution.
Resizing vs. Resampling an Image

So, generally speaking:

• Pixel Dimensions = web
• Document Size = print
Resizing vs. Resampling an Image

Let’s take a look at the Pixel Dimensions part of the Image Size dialog box to see exactly how large our image is, in pixels.
Resizing vs. Resampling an Image

Look at the width and height of your image.

[Image showing pixel dimensions of an image with width 3456 pixels and height 2304 pixels]
Resizing vs. Resampling an Image

Now let’s look at the Document Size section:
Resizing vs. Resampling an Image

Look at the width and height of your document.

Type document size here.
Resizing vs. Resampling an Image

Before we go any further, there’s three more options in the Image Size dialog box below the Document Size section - Scale Styles, Constrain Proportions and **Resample Image**.
Resizing vs. Resampling an Image

The first one, *Scale Styles*, has to do with Layer Styles and how they’re affected by resizing or resampling the image. We’ll ignore that option since it has nothing to do with this topic.
Resizing vs. Resampling an Image

*Constrain Proportions*, which is enabled by default, links the width and height of the image together so that if you make a change to the width of the image.
Resizing vs. Resampling an Image

To better understand the difference between what we’ll call the “Image Resize” version and the “Image Resample” version of the Image Size dialog box, here’s a screenshot of what the Image Size dialog box looks like with the “Resample Image” option checked, and beside it is a screenshot of what Image Size looks like with “Resample Image” unchecked:
Resizing vs. Resampling an Image

Can you spot the difference? With “Resample Image” unchecked (right), if you look up at the Pixel Dimensions section of the dialog box, you’ll see that while Photoshop is still telling us how many pixels are in the image for the width and height, we’re no longer able to change those numbers. With “Resample Image” checked though (left), the pixel dimensions are shown inside white input boxes which we can click inside of and type in new values, effectively changing how many pixels are in our image.
Resizing vs. Resampling an Image

Also notice that the Scale Styles and Constrain Proportions options at the bottom of the Image Size dialog box are grayed out when Resample Image is not checked:

Scale Styles is grayed out because it’s only a concern when the number of pixels in an image is being changed. Since we don’t have the ability to change the number of pixels in the image with Resample Image unchecked, the Scale Styles option is of no concern to us or to Photoshop.
Image Resizing in Photoshop

In Photoshop open the image dialog box, image > image size, and change your image size to 50%.

What happened to your image?
Image Resizing in Photoshop

In Photoshop open the image dialog box, `image > image size`, and change your image size to 200%.

What happened to your image now?