

# How to resize and crop images

You will frequently want to resize and crop an image after opening it in Photoshop from a digital camera or scanner. *Cropping* means cutting some parts of the image away so only the parts you want remain.

## Backing up your original

When working in Photoshop, it is generally best to leave your image at as high a resolution as possible to allow for greater flexibility when generating images.

Before making any changes to an image, you should always save the image with a new filename. You will have the most flexibility if you save it as a PSD—Photoshop’s native format. You can generate TIFFs (for print) and JPEGs (for the web) from a single PSD file. For example, PSD files preserve layers, so the layers are available when you reopen the file.

## Resizing images

The pixel *dimensions* of a bitmap image measure the number of pixels along the image’s width and height. *Resolution* is the level of detail in a bitmap image and is measured in pixels per inch (ppi) or sometimes dots per inch (dpi). Images with higher resolutions produce better printed image quality, but images with higher resolutions also have bigger file sizes. For this reason, most images formatted for the web do not work well for print, and vice versa.

- For images to print well, they generally should have a resolution of 300 ppi.
- For most web pages, you can safely save images at 72 ppi. Because most monitors do not display resolutions higher than this, you can reduce file size by reducing resolution.

**Note:** Monitor technology and Internet connection speeds are continually evolving. However, the 72-ppi standard continues to be widely used, and for the most part, you can’t go wrong with it.

## Changing document size

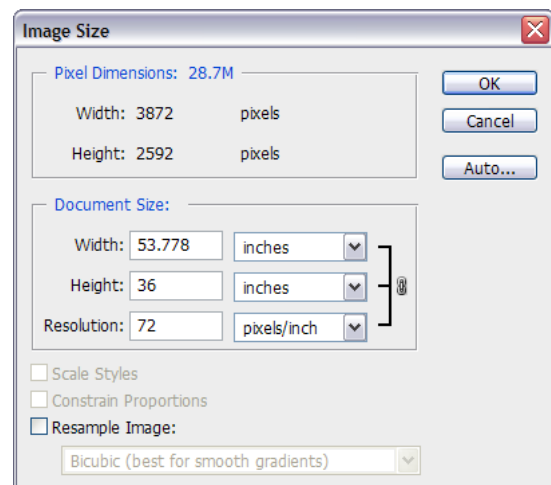
1. Open an image in Photoshop.
2. Save the image with a new name.

This step preserves the original image in case you want to revert to it. You should always make a copy of the original before making changes.

First, look at how the image will appear when printed (that’s what you will be changing when you resize here.)

3. Choose View > Print Size.

The image’s dimensions may exceed the screen size, as they would with an image of 53 by 36 inches (the approximate dimensions of the image in **Figure 1**).



**Figure 1** Image Size dialog box

4. Choose Image > Image Size.

The Image Size dialog box opens (**Figure 1**).

Notice that the dialog box lists two major categories of information about the size of the image.

- *Document Size* refers to how the document appears when printed. Document size is also a starting point for how the document will appear in another document, such as an InDesign file. In later projects, you will place Photoshop images in InDesign files.
- *Pixel Dimensions* refers to the actual number of pixels contained in the image. Pixel dimensions also represent the amount of *data* in the image. Unless you select the Resample Image option, pixel dimensions will remain the same as you resize and change resolutions.

5. Make sure the Resample Image option is not selected.

The Resample option changes the amount of information in the image as you resize. For now, it's best to leave this option deselected.

**Note:** You can use resampling to make enlargements. However, because resampling can only estimate pixels, it is best to take the picture with a larger resolution in the first place.

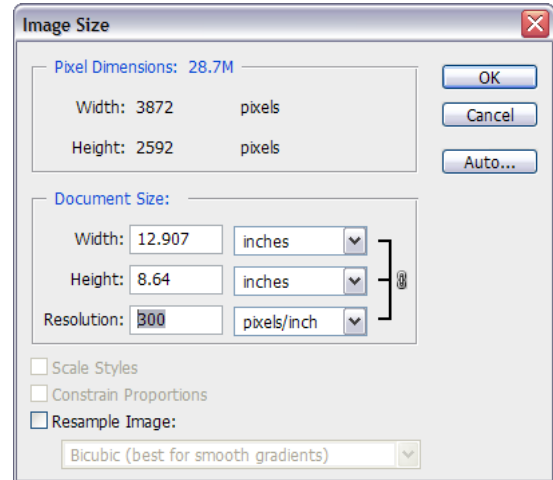
6. Change the values for Width, Height, or Resolution.

Observe that the other two numbers change accordingly. For example, in **Figure 2** the resolution is 300 ppi. The height and width of the document are reduced by about 75% because more pixels are used per inch.

7. Click OK to apply changes and close the dialog box.

8. Choose View > Print Size.

The image appears resized—approximately 13 x 8.5 inches for the example used in **Figure 2**.



**Figure 2** Image Size dialog box with resolution changed to 300 ppi

### Reducing an image's size (pixel dimensions)

Although you will often want to keep pixel information, sometimes you need to reduce the total (pixel) size of an image. This step removes pixels and reduces file size. You will usually do this when preparing the image for the web or other electronic medium; for print, you will generally want to simply change the document's size. (Of course, you may want to reduce file size for other reasons, such as to preserve hard disk space or to speed up image rendering.)

To reduce an image's pixel dimensions:

1. Choose Image > Image Size.

The Image Size dialog box opens (**Figure 1**).

In the previous steps you attended only to the document size. This time you will ignore that area and focus on the pixel dimensions.

2. Check Resample Image.

Observe that the Pixel Dimensions menus and the Constrain Proportions option become active.

3. To maintain the image's current height/width ratio, select Constrain Proportions.

This option automatically changes the width as you change the height, and vice versa. For example, if you start with an image of 2000-pixel width and 1000-pixel height (a 2:1 width/height ratio) and change the width to 1000 pixels, the height automatically changes to 500 pixels when Constrain Proportions is checked. Generally, selecting this option is a good idea.

**Note:** You can ignore Scale Styles for now. This option comes into play only when you have styles applied to layers.

4. Choose Bicubic Sharper from the Resample Image list.

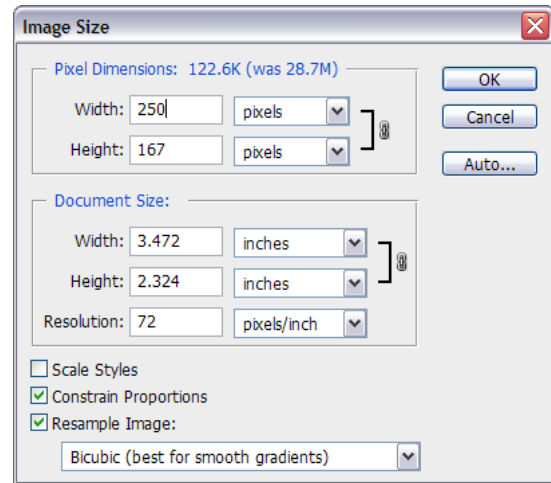
This option is best for reductions.

5. In the Pixel Dimensions Width box, enter the desired width in pixels.

You can also choose a percentage by changing the unit beside the Width box from Pixels to Percent (**Figure 3**).

6. Click OK to change the image's pixel dimensions.

**Note:** After the size reduction, you should apply the Unsharp Mask filter to the image by choosing Filter > Sharpen > Unsharp Mask. This will clear up any blurriness that results from the reduction.



**Figure 3** Image Size dialog box with Resample Image selected

## Cropping images

You'll often take pictures that are larger than you need. (Taking pictures that are larger than you need, at as high a resolution as possible, gives you flexibility in selecting parts of the image.) When you crop an image, you select the part of it that you wish to show. You can also straighten the image as you crop it.

You can crop an image in one of two ways:

- You can apply the Crop command after selecting the image with one of the selection tools.
- You can use the Crop tool. (This guide covers the Crop tool.)

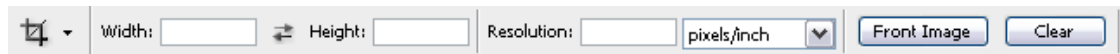
*To crop an image by using the Crop tool:*

1. Click the Crop tool in the toolbar.

The pointer changes to the Crop tool.

2. You can set the size of the area to be cropped in the Options toolbar (**Figure 4**).

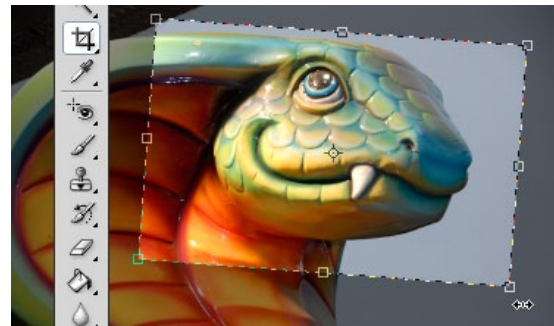
To size the area manually, make sure all fields in the Options toolbar are empty.



**Figure 4** Crop tool options

3. Drag on the image to select a crop area (**Figure 5**).
4. Move the pointer over a corner of the selected area.  
The pointer changes to a rotation arrow. You can rotate the crop area slightly to correct any crookedness.  
In **Figure 5**, the crop area was rotated slightly clockwise to align the orientation of the snake's head.
5. Once you are satisfied with the crop area, press Enter (Windows) or Return (Mac OS).

The image is cut to the selected area (**Figure 6**).



**Figure 5** Crop area selected



**Figure 6** Crop applied