

# Through The Lens

*A guide to digital photography for computer enthusiasts.  
After the click of your camera, you're only half done!*

OPCUG



*Users helping users  
for over 40 years*

## Printing your photos

*by Lynda Buske*

Despite our digital world, it is really nice sometimes to print a photo that you can stick on your fridge, display on your wall or even frame and give as a gift. The main thing to remember is that there may be limitations in the print size for a digital image.

All digital cameras and cell phones have sufficient megapixels to provide the resolution for a 4x6 or 5x7 photo enlargement. Many would even have enough for much larger prints (e.g., 8x10 or 11x14). However, cropping in post-production will reduce your image dimensions.

The best starting point is to determine what a good quality home printer or commercial printer will provide. In most instances, the gold standard is 300 dpi (dots per inch) which you can equate to 300 pixels. That means, if you want to print an 8x10, the long side of your image, ideally, would be at least 3000 pixels (10x300). For 16x20, you would probably want the long side to have around 6000 pixels.

The table below provides a rough guideline for what is the maximum print size of good quality that you can expect based on the number of megapixels your camera has.

Camera resolution	File size at high resolution (pixels)	Max print size at 330 dpi
2 megapixels	1200 x 1600	4 x 5
3 megapixels	1536 x 2048	5 x 7
8 megapixels	2448 x 3264	8 x 10
10 megapixels	2592 x 3888	8 x 14
12 megapixels	2800 x 4000	8 x 14
16 megapixels	3264 x 4920	11 x 14
21 megapixels	3744 x 5616	12 x 18
24 megapixels	4000 x 6000	16 x 20

If you have a 24MP camera, then your images will probably be 6000x4000 pixels. This means you can do a lot of cropping before going under the 3000 pixel threshold. If you shoot with a 12 MP camera and then crop your images significantly, you may not be able to print an 8x10. But if your cropped image dimension is still around 1200x1600, based on the chart above, you could print a 4x6. Some older cell phones have only 5 or 6 megapixels so be careful when deciding what size to print. Unfortunately, many of the family pictures that we want to treasure are taken at social events with cell phones so get in close to minimize the need to crop. Unless you are sure

your cell phone has an optical zoom on the camera, don't "zoom" with the finger spread as that is just cropping and hence losing resolution. Even if cell phones tout 20MP or 100MPs, almost all only output 12MP due to pixel binning [[https://en.wikipedia.org/wiki/Pixel\\_binning](https://en.wikipedia.org/wiki/Pixel_binning)].

The easiest way in the *Windows* environment to see the dimensions of your image is to go to *File Explorer* and right click on the photo. Then click on *Properties*, select the detail tab and find the dimensions below.

One final consideration when making prints is the viewing distance. If you print a 4x6, there is a good chance it will be held in your hand or in an album and hence very close to your discerning eye. If, on the other hand, you make an 11x14 print for your wall, it may never be viewed at less than a few feet and therefore the resolution does not have to be as good.

You may have to experiment as to which image dimensions produce an adequate enlargement for your viewing needs as well as which printing service provides the quality you want. My recommendation is to print one 8x10 as a test before committing to a company. When submitting digital photos online, many services will give you a warning if the resolution is not adequate for the print size you have requested.

I have found the quality of prints at Shutterfly and Photobook Canada to be very good but there are significant delivery fees. Staples on the other hand has the quality but no delivery fees if you pick it up at the store. However, it takes five business days. If you want a quick turn around of 4x6 prints, a place like Walmart is probably all you need.