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Printing your photosBy Lynda Buske

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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 the print size for a digital image may be limited.

All digital cameras and cell phones have sufficient megapixels to provide the resolution for a 4x6 or 5x7 photo enlargement. Many would 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 determining what a good quality home 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 would ideally be at least 3000 pixels (10x300). For 16x20, you would probably like the long side to have around 6000 pixels.

The table below provides a rough guideline for 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  3 megapixels  8 megapixels  10 megapixels  12 megapixels  16 megapixels  21 megapixels  24 megapixels | 1200 x 1600  1536 x 2048  2448 x 3264  2592 x 3888  2800 x 4000  3264 x 4920  3744 x 5616  4000 x 6000 | 4 x 5  5 x 7  8x 10  8 x 14  8 x 14  11 x 14  12 x 18  16 x 20 |

If you have a 24MP camera, 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. However, 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 family pictures we want to treasure are taken at social events with cell phones, so get 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].

The easiest way to see your image's dimensions in the Windows environment 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 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 and which printing service provides the quality you want. I recommend printing one 8x10 as a test before committing to a company. When submitting digital photos online, many services will warn you if the resolution is not adequate for the print size you requested.

I have found the quality of prints at Shutterfly and Photobook Canada to be very good, but there are significant delivery fees. On the other hand, Staples 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 turnaround of 4x6 prints, a place like Walmart is probably all you need.