

Keep in mind that not every pixel per inch must be printed with one dot per inch. For the purpose of printing one pixel, numerous dots per inch may be utilized. The majority of color printers employ the CMYK model, which is the cause of this. There are only a few colors. In contrast to the hundreds of thousands of colors available on a computer, the printer must choose from these colors to create the color of each pixel.

The higher is the dpi of the printer, the higher is the quality of the printed document or image on paper.

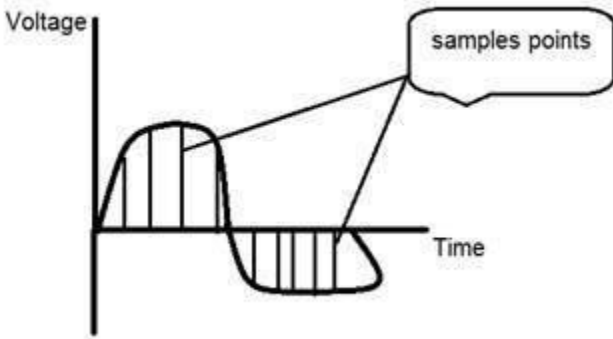
Usually some of the laser printers have dpi of 300 and some have 600 or more.

Lines per inch

When dpi refers to dots per inch, lpi refers to lines of dots per inch. The resolution of halftone screen is measured in lines per inch.

The following table shows some of the lines per inch capacity of the printers.

Printer	LPI
Screen printing	45-65 lpi
Laser printer (300 dpi)	65 lpi
Laser printer (600 dpi)	85-105 lpi
Offset Press (newsprint paper)	85 lpi



### Sampling with relation to digital images

The concept of sampling is directly related to zooming. The more samples you take, the more pixels, you get. Oversampling can also be called as zooming. This has been discussed under sampling and zooming tutorial.

But the story of digitizing a signal does not end at sampling too, there is another step involved which is known as Quantization.

What is quantization

Quantization is opposite to sampling. It is done on y axis. When you are quantizing an image, you are actually dividing a signal into quanta(partitions).

On the x axis of the signal, are the co-ordinate values, and on the y axis, we have amplitudes. So digitizing the amplitudes is known as Quantization.

Here how it is done

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