Arroweye's CMYK Printing Education

Here is a quick reference in relation to CMYK (Cyan, Magenta, Yellow, Black) printing process works in relation to Pantone Colors, RGB (Computer Monitors), or the actual visible color gamut/spectrum.
Below is an image of what is called a color gamut

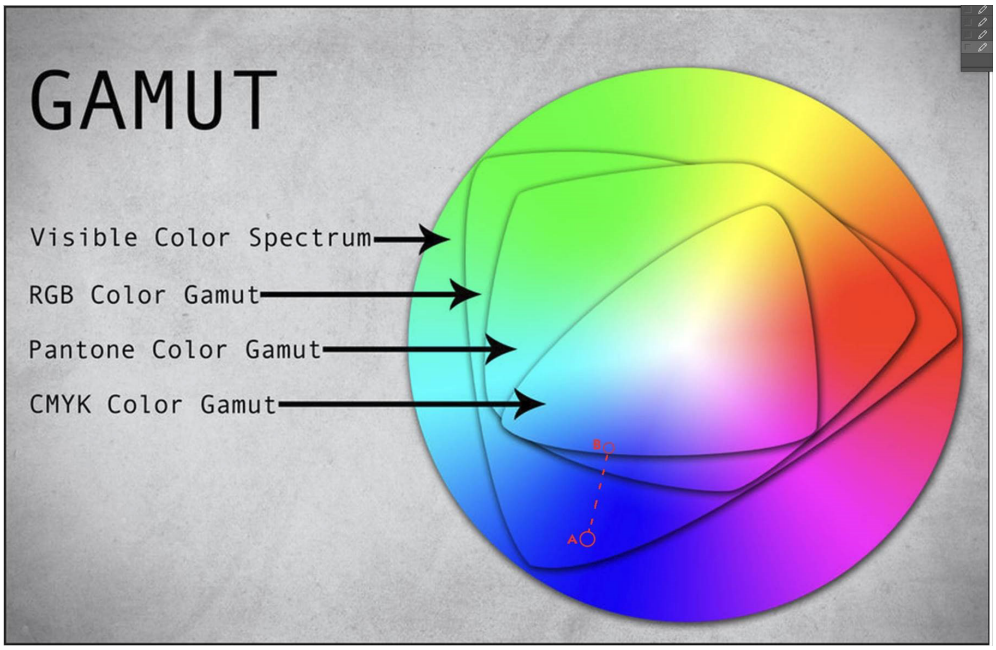
- The outer circle labeled "Visible Color Spectrum" is everything that the human eye can see.
- The shape labeled "RGB Color Gamut" is what a PC monitor can display
- The shape labeled "Pantone Color Gamut" is what a press could print if they were to mix custom pantone inks into the press (Pantone inks are not currently a supported print process within the Arroweye print workflow.)
- The shape labeled "CMYK Color Gamut" is what CMYK printers are capable of printing using a mixture of Cyan, Magenta, Yellow, and Black Inks.

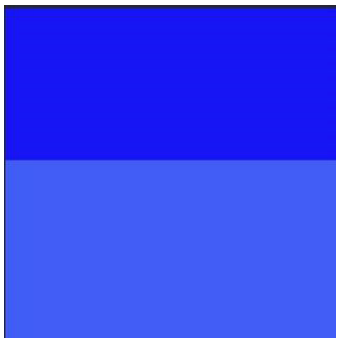
CMYK has a defined color gamut space that is achievable through that color space in printing.

If the color selection (labeled "A") within the RGB value section is the desired color, then that selection would be outside of the CMYK Color Gamut and is not achievable with the CMYK printing process.

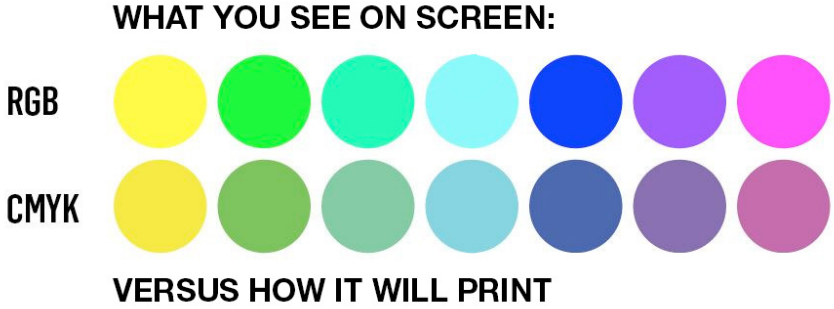
CMYK printing presses print the color that is the shortest delta to that Value within the CMYK Color Gamut, so the expected output would print as B. (There is another image below showing the 2 colors next to each other)

*Note this image is an example of the Gamut's as CMYK inks differ from machine to machine. Often, Arroweye can match color closer than what shows in the example, but there are colors that are significantly different. Experience dictates that Vibrant Blue's and greens are the hardest to hit colors in the Arroweye print platform of CMYK.





The top blue is the area that was circled A
The bottom is what would print circled B



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