RGB to CMYK Conversion Method

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C is the part of Cyan in the color to convert.
M is the part of Magenta in the color to convert.
Y is the part of Yellow in the color to convert.
K is the part of black (K for Key, to avoid confusion with Blue)

M_{axC} is the possible maximum of C (generally 100, 1 or 255)
M_{axM} is the possible maximum of M (generally 100, 1 or 255)
M_{axY} is the possible maximum of Y (generally 100, 1 or 255)
M_{axK} is the possible maximum of K (generally 100, 1 or 255)

R', G', B', C', M', Y' and K' are internal variables that don't need to be displayed.

R is the part of Red in the converted color.
G is the part of Green in the converted color.
B is the part of Blue in the converted color.

M_{axR} is the possible maximum of R (generally 100 or 255).
M_{axG} is the possible maximum of G (generally 100 or 255).
M_{axB} is the possible maximum of B (generally 100 or 255).

$$C' = \frac{C}{M_{axC}}$$

$$M' = \frac{M}{M_{axM}}$$

$$Y' = \frac{Y}{M_{axY}}$$

$$K' = \frac{K}{M_{axK}}$$

$$R' = (1 - C') \times (1 - K')$$

$$G' = (1 - M') \times (1 - K')$$

$$B' = (1 - Y') \times (1 - K')$$

$$R = M_{axR} \times R'$$

$$G = M_{axG} \times G'$$

$$B = M_{axB} \times B'$$