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PREFACE

"The proof is in the pudding" but for designers working with print, "the proof is in the proof"! Sadly, this can bring to light unwelcome discrepancies between the design and the galley, resulting in costly and time-consuming iterations. Colour is notorious for causing many a designer's headaches and experience is the only tool to help mitigate these discrepancies. Experience and aids like this book, that is.

HUEmongous is a colour selection tool—to and from CMYK. A particular use case is to help designers visualise how a solid colour, appearing on their computer monitor, would look like in print. Incorporating *HUEmongous* into your design workflow is simple: select a CMYK colour value in your design software and find the closest match(es) in the book or, select a CMYK swatch in the book and use its value as a starting point in your design software. Beside print production, the book can find applications anytime colour must be quantified or communicated, usually with the goal of being reproduced.

The book comprises two sections. A preliminary section illustrates various aspects of colour and useful characteristics of the CMYK process in hand. The main section presents over 14,000 colour swatches organised in a grid format. Each swatch is formed by combining Cyan (C), Magenta (M), Yellow (Y), and Black (K) inks in various proportions. Ink value is raised in 10 percentage point increments, from 0% to 100%. Colours are ordered in ascending CMYK values (raising K first, then Y, then M, and C last). There is one grid per page, with gradations around the grid. Each grid shows shades of a CMY colour (K from 0 to 90). Blacks (colours with 100K) are grouped together at the end of the section. On manufacturing grounds or to save on ink (and keep costs down), many print shops impose a total ink coverage limit below 400. The visual impact of this limitation on colours is usually quite reasonable and justifies the trade-off. The fifth "colour" to account for is the colour of the paper, which is a flavour of white, though this is typically calibrated out by the printer. Remember to view colours in suitable lighting conditions (e.g., D50).

Throughout the book, CMYK numbers are formatted in percentages (0-100) and are written either in a row or in a column, always in this order: C, M, Y, followed by K. Unless stated otherwise, C/M/Y/K alone refer to ink solids: C (100 0 0 0), M (0 100 0 0), Y (0 0 100 0), K (0 0 0 100). The book is printed in a four-colour CMYK process on coated stock.

CMYK PROCESS SECTION

Using the swatch grids shows by example how to read the colour grids featured in the book.

Tints shows swatches of all four process colours with ink values ranging from 5 to 100 in steps of 5.

Fine step tints shows tints with ink values ranging from 1 to 100, in steps of 1. The value of each swatch is obtained by adding the corresponding label values of the X and Y axes. For example, the swatch value in column 3, row 2, is 20 + 2 = 22.

Gradients presents one- and two-colour gradients. Issues like banding are difficult to predict and gradient smoothness depends on colours involved, length, press, and so forth.

Colour wheel cycles through a palette of colours, gradually

mixing in one process colour with another (one or two CMY colours at once, never three, and no K). The colour chart uses the wheel's colours to produce tints and shades for each.

"Shades" of black is a by-product of ink opacity which makes stand-alone black appear more or less washed out on paper. Luckily, other inks can come to the rescue to beef up this greyish black and make it a deeper black with hints of other hues. Several blacks are shown side by side.

Black substitution shows how black ink can stand in for some amounts of CMY inks and reduce total ink coverage.

Overprint demonstrates how an ink seems to show through another ink placed on top of it, altering the perceived colour. Note that the stacking order of elements on a page is unrelated to the order in which the printer lays down inks on paper (e.g., Y first, then M, then C, and K last).

Black overprint showcases the most common ink to overprint. The final row features a K element moving from top to bottom of a stack of C/M/Y elements.

Multiply vs. overprint compares these two print settings that are sometimes mistaken for one another.

The next few pages are not related to colours per se but to the print process and can be useful in the design phase.

Dots shows tiny geometric shapes in all process colours.

Rules shows lines of various widths. The distinction between finer rules may or may not be apparent and is due in part to the press capabilities.

Type shows type of various sizes in all process colours.

Rule and type tints shows that caution should be exercised when combining finely printed elements with screening.

Ink spread highlights how ink can slightly spread on paper, due to factors like ink viscosity or paper absorption. This is also the basis for dot gain. Like misregistration, ink spread can lead to noticeable defects. For example, elements in the design appear narrower on paper or disappear altogether (e.g., serifs in knockout type).

SWATCH GRIDS SECTION

Colour matching is a practical example of matching a colour to swatches in the book.

Separations presents colour plates for all the swatch grids.

Colours features CMYK swatches in grid format.

Blacks features swatches made of any CMY and K=100.

Swatch shutters are little masks designed to hide swatches surrounding the swatch of interest. Photocopy or download from the website and print out.

For additional information on the book and any updates, please visit: www.pelemeleworks.com

If you have a question, spot a mistake, or anything else, you are welcome to **get in touch** through the website. Support *Pêlé-Mêlé Works* titles and **write a review** on Amazon or elsewhere. Thank you!

Values for colours (any CMYK except for K=100) are grouped together.

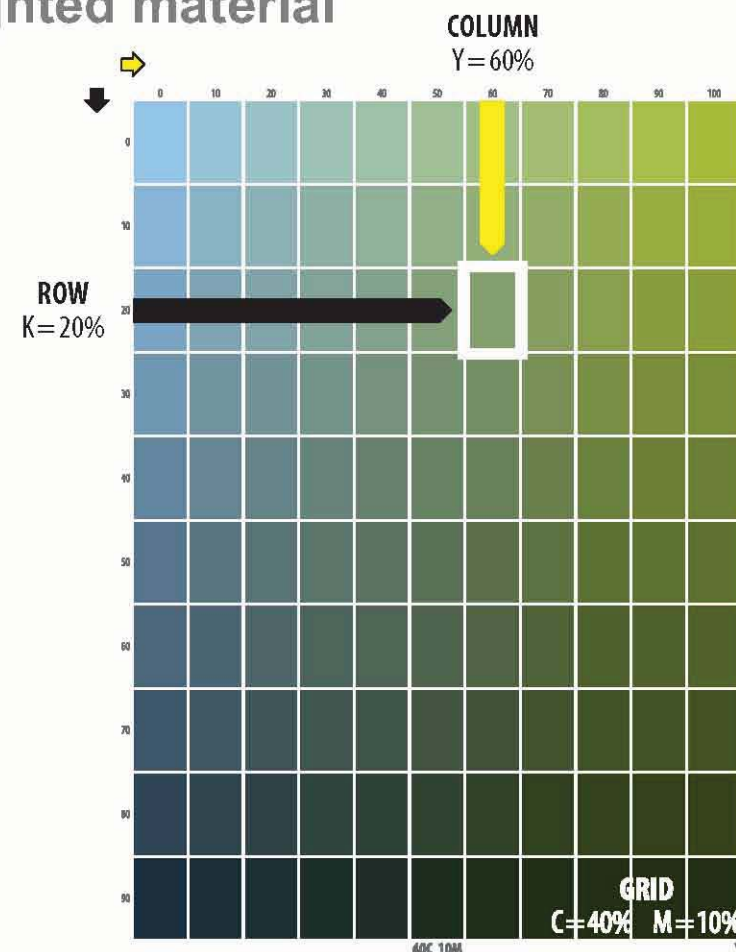
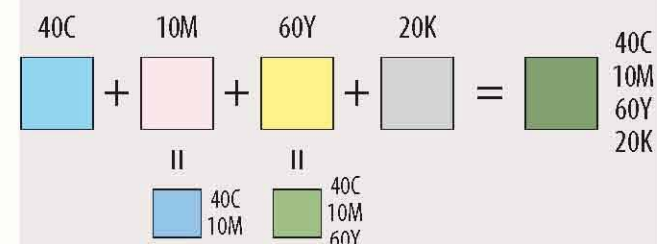
- Values for **C and M are constant** for the grid and are indicated at the bottom of the grid.
- Values for **Y vary from left to right** from 0 to 100 in steps of 10.
- Values for **K vary from top to bottom** from 0 to 90 in steps of 10.

For the swatch on the grid, its CMYK value is:

- C and M are the grid values: C=40 and M=10.
- Y is the column value: Y=60.
- K is the row value: K=20.

The full CMYK value is: 40C 10M 60Y 20K.

This grid features values 40-10-0-0 to 40-10-100-90.



Values for blacks (K=100, any CMY) are grouped in a section of their own.

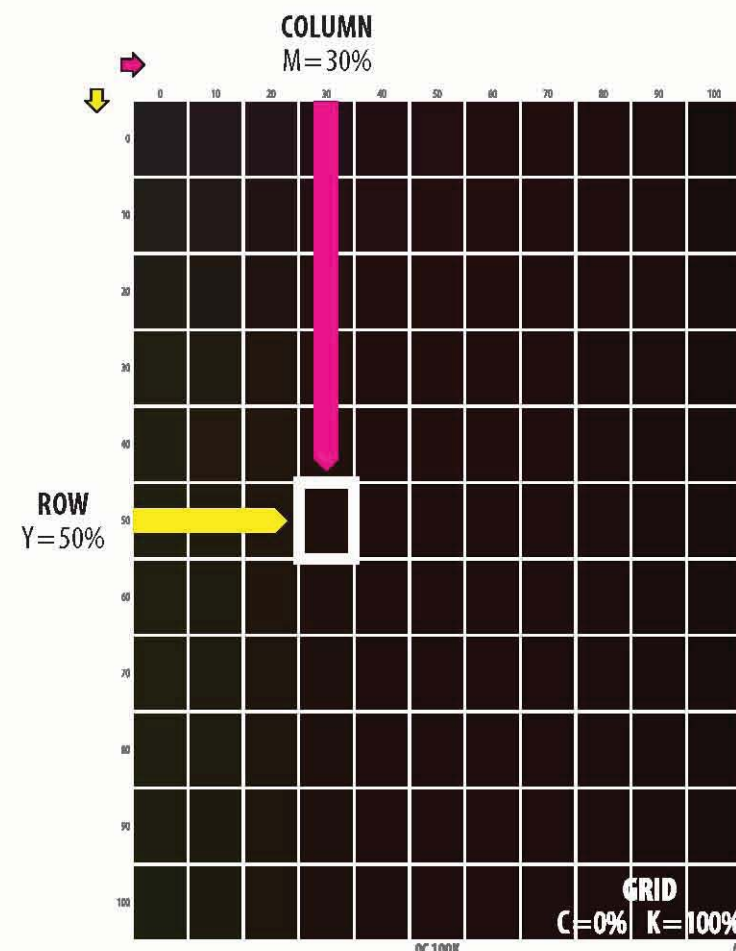
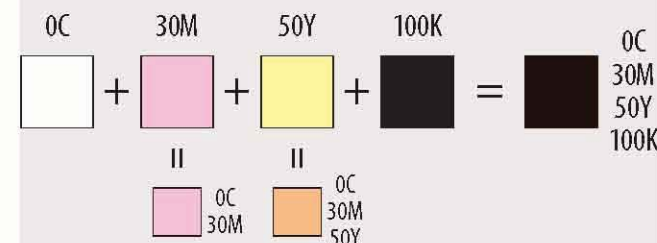
- Values for **C and K are constant** for the grid and are indicated at the bottom of the grid.
- Values for **M vary from left to right** from 0 to 100 in steps of 10.
- Values for **Y vary from top to bottom** from 0 to 100 in steps of 10.

For the swatch on the grid, its CMYK value is:

- C is the grid value: C=0.
- M is the column value: M=30.
- Y is the row value: Y=50.
- K is constant: K=100.

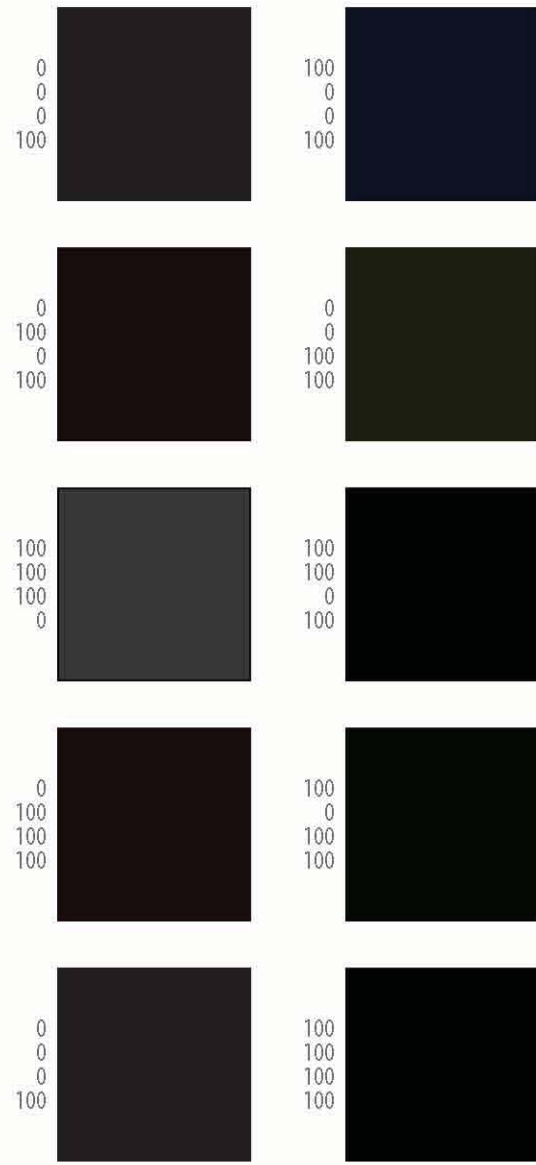
The full CMYK value is: 0C 30M 50Y 100K.

This grid features values 0-0-0-100 to 0-100-100-100.

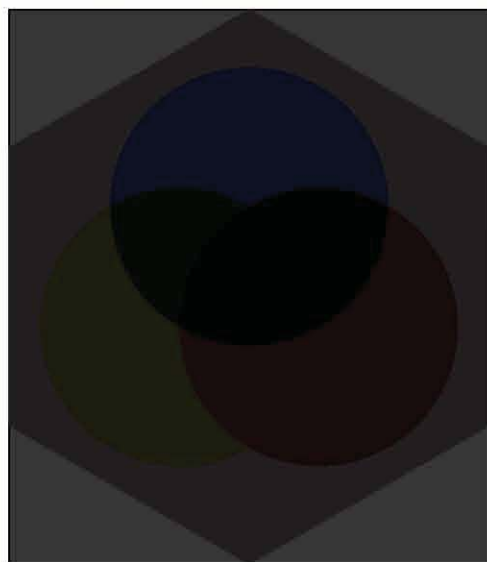


SHADES OF BLACK

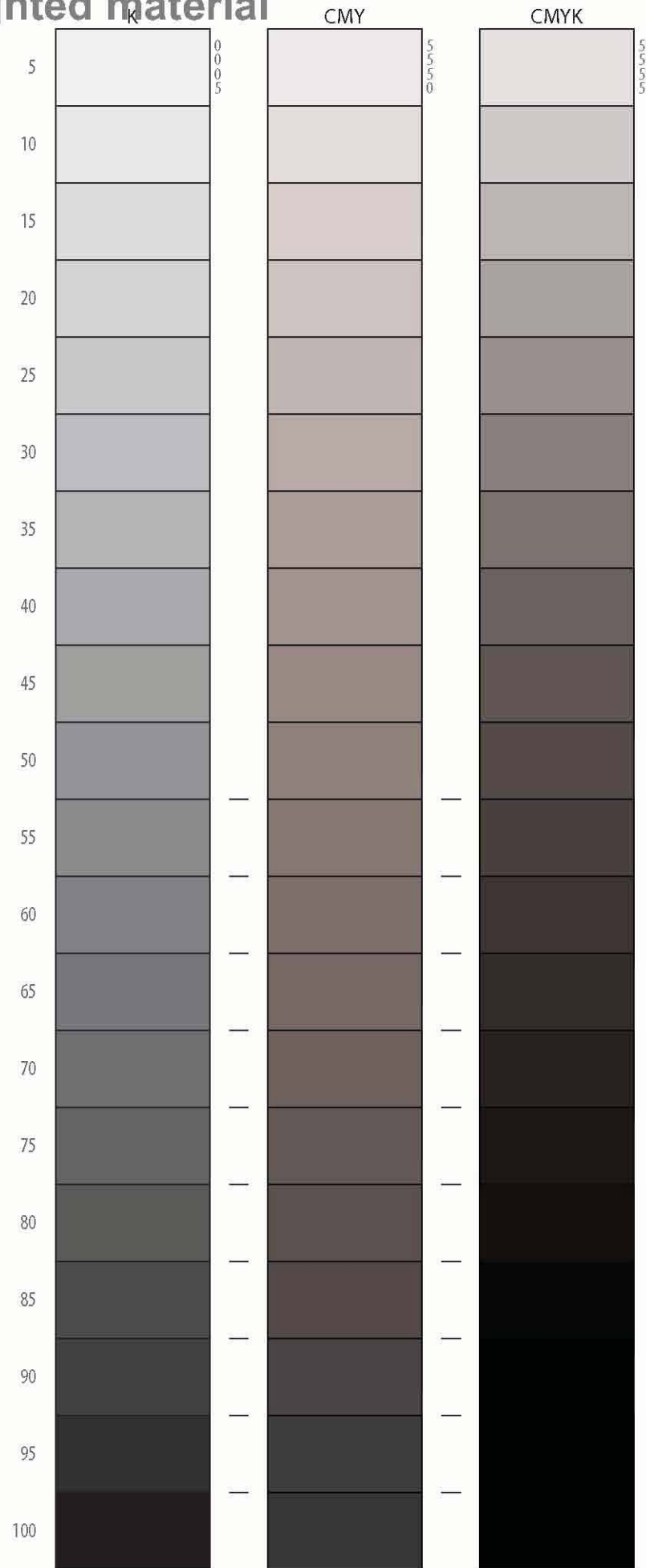
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all multiply except rectangle
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 HEXAGON: 0 0 0 100
 TOP DISC: 100 0 0 0
 LEFT DISC: 0 0 100 0
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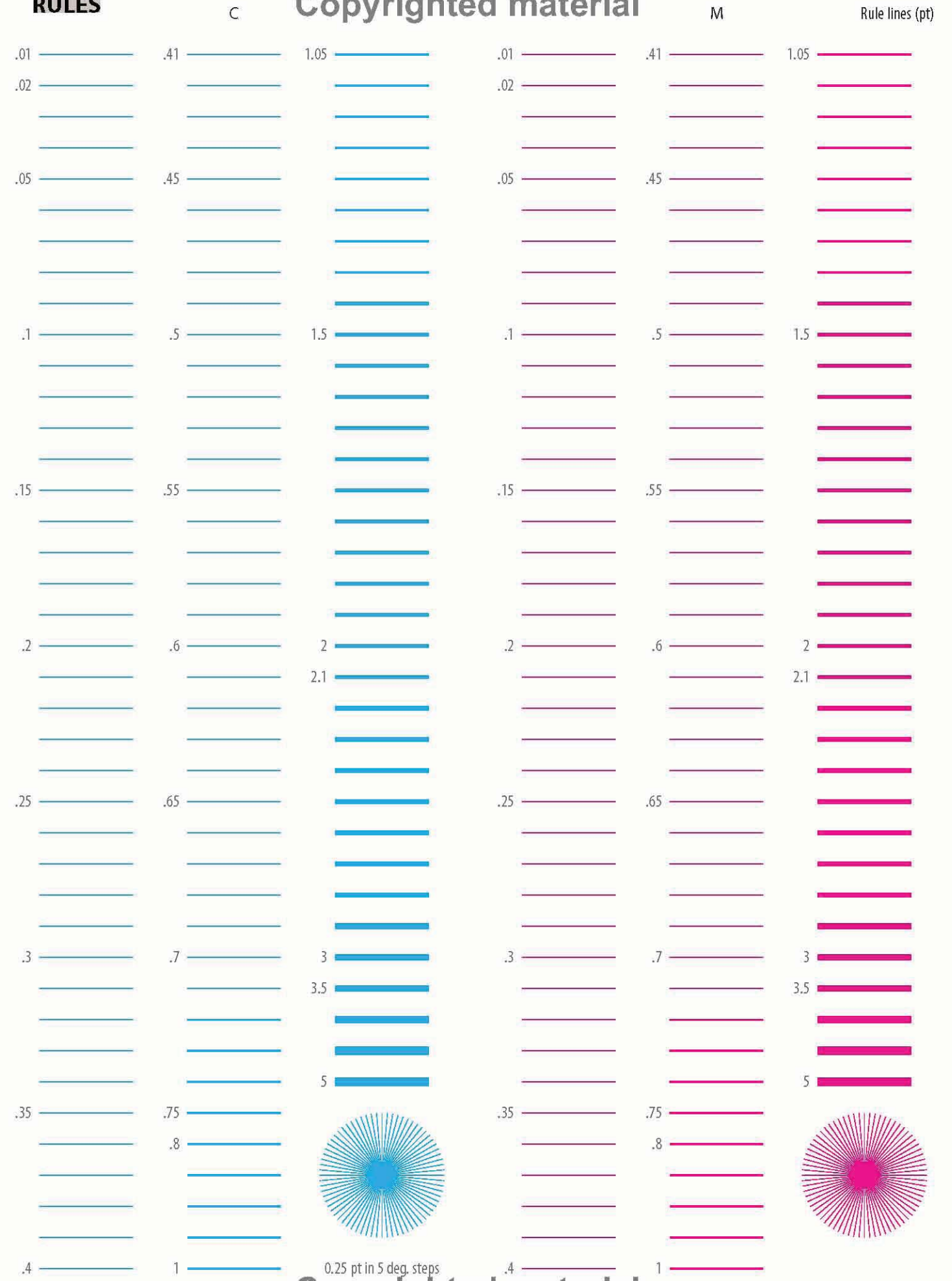


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