WriteOnGrid [en]
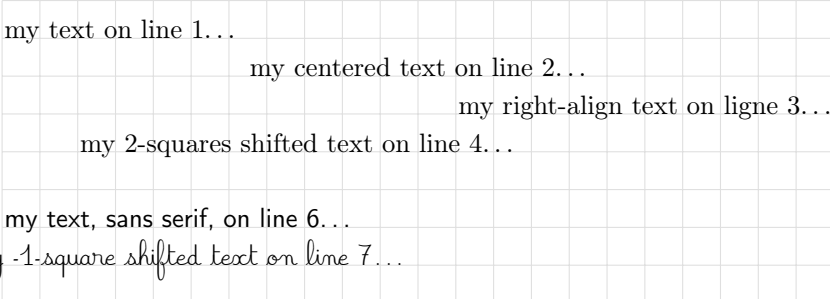
To write on lines of a grid.
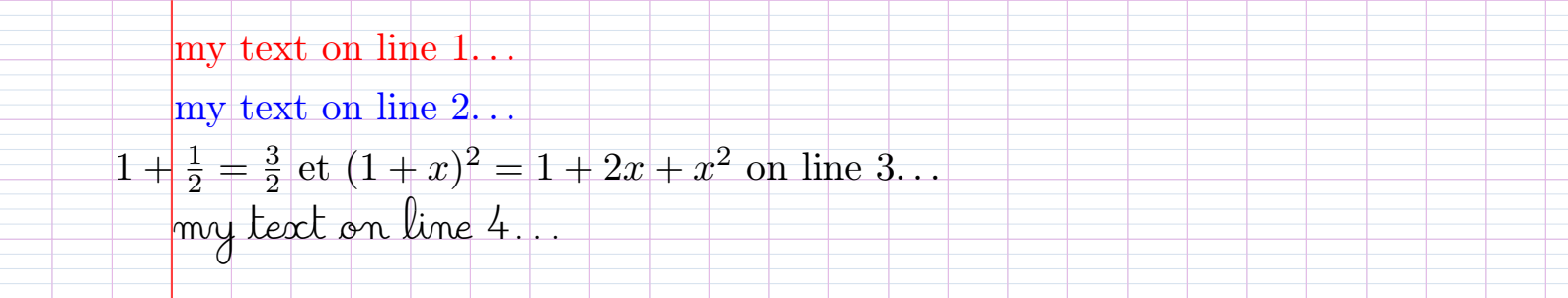
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https://github.com/cpierquet/WriteOnGrid

▶ Some commands to create a grid (5x5 or Seyes or Ruled) and to write "on" the lines.

▶ Possibility to personnalize size, margins, ...

my text on line 1...

my centered text on line 2...

my right-align text on ligne 3...

my 2-squares shifted text on line 4...

my text, sans serif, on line 6...

my -1-square shifted text on line 7...

my text on line 1...

my text on line 2...

$1 + \frac{1}{2} = \frac{3}{2}$ et $(1 + x)^2 = 1 + 2x + x^2$ on line 3...

my text on line 4...

Thanks to Patrick Bideault for ideas and help !

LaTeX

pdfLaTeX

LuaLaTeX

TikZ

TeXLive

MiKTeX

Usage

1 The package

1.1 Loading of the package, used packages

The package WriteOnGrid loads within the preamble :

```latex
\usepackage{WriteOnGrid}
```

It's mostly compatible with latex, pdflatex, lualatex or xelatex compilation !

For a better compatibility, xcolor isn't charged anymore with options, so the usefull colors are directly defined within the package.

It loads the following packages and libraries :

- tikz with the librairies ⟨**calc**⟩ and ⟨**positionning**⟩ ;

- xstring, xparse and simplekv.

1.2 The package itself

The idea is to, thanks to TikZ, propose commands and environment to work with a grid, and to write on the lines.

```latex
%environment, with keys to prepare the grid
%commands to write or pass a line

\begin{EnvGrid}[keys]<color>
    \WriteLine[keys]<alignment>{text}
    \PassLine
\end{EnvGrid}
```

1.3 Overall functioning

The grid is given by the number of squares (nbCol×nbRow), and after we can adjust with *overtakings* to enlarge the grid onto the margins of the paper (left or right). We can also *adjust* the global margin, to begin the lines differently.

For example, a 5×5 grid :

- with a size 24x5 squares ;

- with an overtaking by 2 squares at the left and 3 squares at the right ;

- with a global margin of 1 square ;

- with a *border* to show the *basis* grid.
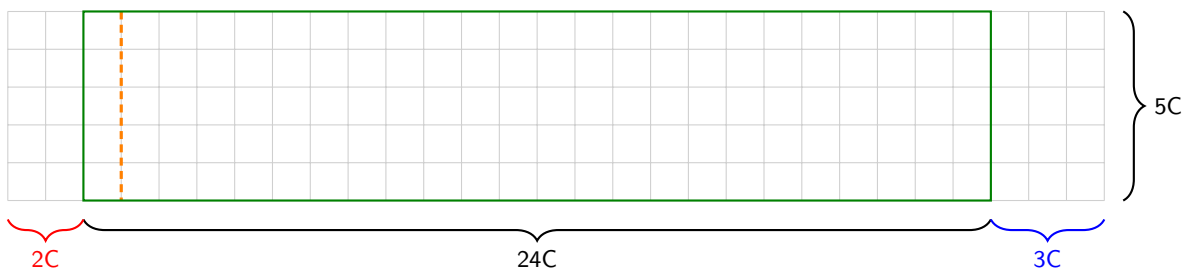
The tikzpicture is *bounded* by the *border*, in order to specify overtakings or alignment.

Le left-border of the *border* is aligned on the left-margin of the page, so take care of the \parindent.

1.4 Predefined colors

The package WriteOnGrid proposes "shortcuts" for classic colors !

```latex
\definecolor{TyrianPurple}{rgb}{0.4,0.01,0.24}
\definecolor{PapierRose}{HTML}{E6B8E6}
\definecolor{PapierGris}{HTML}{D7E2EE}
%Colors for Seyes
\def\ColSeyes{PapierRose/PapierGris}
%Colors for Ruled
\def\ColRuled{PapierGris/TyrianPurple}
```

TyrianPurple
PapierRose
PapierGris
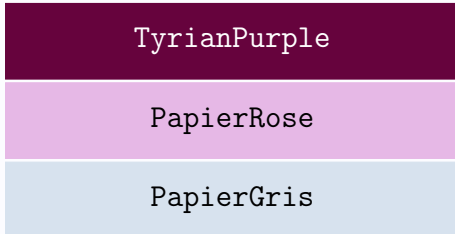
1.5 The number of squares

The number of grid squares (for individual grids and environments) can be given in several ways:

- ⟨**NumSquares=<nbcols>x<nblines>**⟩ to specify manually;

- ⟨**NumSquares=Auto**⟩ to fill the rest of the page (horiz. and vert.);

- ⟨**NumSquares=Cx<nblines>**⟩ to fill horizontally and specify the number of lines;

- ⟨**NumSquares=<nbcols>xL**⟩ to fill vertically and specify the number of columns.

Note that the calculations carried out to determine the remaining *space* do not take into account any elastic springs that LaTeX can add to *optimize* the space.

To *force* the addition of additional line(s), it is possible to use:

- ⟨**NumSquares=Auto***⟩ to force the addition of one more line;

- ⟨**NumSquares=Auto****⟩ to force the addition of two more lines;

- ⟨**NumSquares=Auto*****⟩ to force the addition of three more lines;

- etc.

2 Commands, keys and options

2.1 The command

```
%command, with keys to prepare the grid

\DispGrid[keys]<color>
```

The first argument, *optional*, between [...] give the ⟨**keys**⟩ :

- ⟨**NumSquares**⟩ to specify the size of the grid, under (nbCol)x(nbRow) ;   default : ⟨**17x5**⟩
- ⟨**Unit**⟩ to specify the scale of the grid ;   default : ⟨**1**⟩
- ⟨**Margin**⟩ to specify the global margin at the beginning of the lines ;   default : ⟨**0**⟩
- the boolean ⟨**DispBar**⟩ to display or not the bar ;   défaut : ⟨**true**⟩
- ⟨**Enlarge**⟩ to specify the squares-overtakings, globally with LR or side by side with L/R ;   default : ⟨**0**⟩
- the boolean ⟨**Border**⟩ to display the basis border of the grid ;   default : ⟨**false**⟩
- the key⟨**Grille**⟩, from ⟨**5x5/Seyes/Ruled**⟩, to specify the grid's type.   défaut : ⟨**5x5**⟩

The second argument, *optional*, between <...> is the color(s) of the grid :

- by ⟨**Color**⟩ (⟨**lightgray!50**⟩ by default) for 5×5 ;
- by ⟨**ColorA/ColorB**⟩ (⟨**lightgray!50/lightgray!25**⟩ by default) for Seyes or Ruled.

```
%18x4 big squares, w/o overtaking, Seyes colors, w/o margin/bar
\DispGrid[NumSquares=18x4,Grid=Seyes,DispBar=false]<\ColSeyes>

%36x8 small squares, overtakings 3/3, PapierGris color
\DispGrid[NumSquares=36x8,Enlarge=3/3]<PapierGris>

%12x3 lines "Ruled", w/o overtakins, Ruled colors, centered, with 2-margin
\begin{center}
    \DispGrid[NumSquares=12x3,Grid=Ruled,Margin=2]<\ColRuled>
\end{center}
```
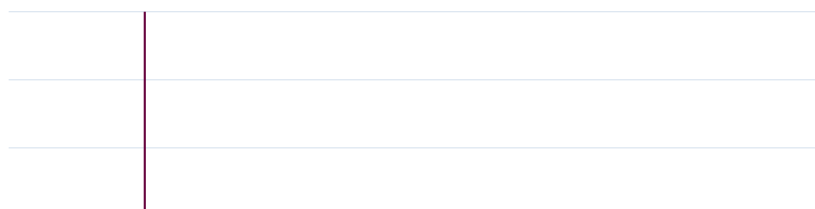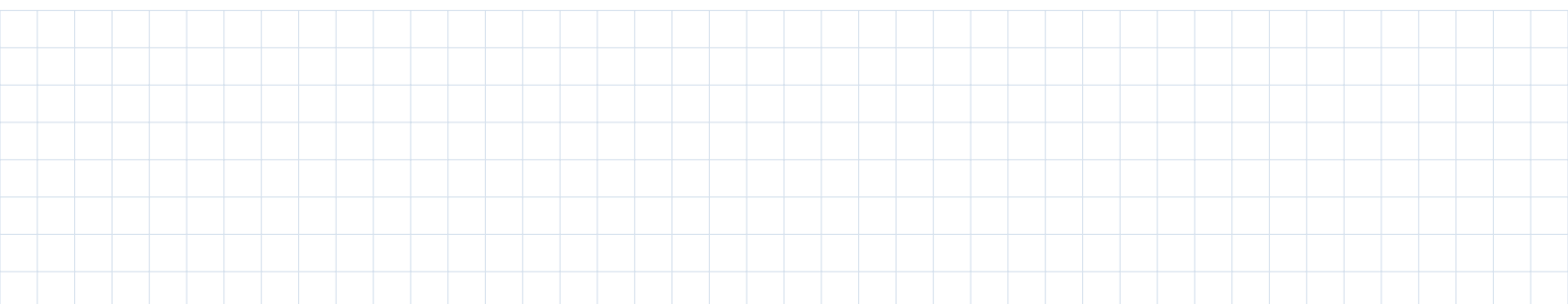
2.2 The environment

The first argument, *optional*, between [...] give the ⟨**keys**⟩ :

- ⟨**NumSquares**⟩ to specify the size of the grid, under (nbCol)x(nbRow) ;   default : ⟨**17x5**⟩
- ⟨**Unit**⟩ to specify the scale of the grid ;   default : ⟨**1**⟩
- ⟨**Margin**⟩ to specify the global margin at the beginning of the lines ;   default : ⟨**0**⟩
- the boolean ⟨**DispBar**⟩ to display or not the bar ;   défaut : ⟨**true**⟩
- ⟨**Enlarge**⟩ to specify the squares-overtakings, globally with LR or side by side with L/R ; default : ⟨**0**⟩
- the boolean ⟨**Border**⟩ to display the basis border of the grid ;   default : ⟨**false**⟩
- the key⟨**Grille**⟩, from ⟨**5x5/Seyes/Ruled**⟩, to specify the grid's type.   défaut : ⟨**5x5**⟩

The second argument, *optional*, between <...> is the color(s) of the grid :

- by ⟨**Color**⟩ (⟨**lightgray!50**⟩ by default) for 5×5 ;
- by ⟨**ColorA/ColorB**⟩ (⟨**lightgray!50/lightgray!25**⟩ by default) for Seyes or Ruled.

<div style="border:1px solid blue; border-radius:10px;">

Code LATEX

```
%18x4 big squares, w/o overtaking, Seyes colors, 3-margin
\begin{EnvGrid}[NumSquares=18x4,Grid=Seyes,Margin=3]<\ColSeyes>
\end{EnvGrid}

%36x8 small squares, overtakings 3/3, PapierGris color
\begin{EnvGrid}[NumSquares=36x8,Enlarge=3/3]<PapierGris>
\end{EnvGrid}

%12x3 lines "Ruled", w/o overtakins, Ruled colors, centered, with 2-margin
\begin{center}
    \begin{EnvGrid}[NumSquares=12x3,Grid=Ruled,Margin=2]<\ColRuled>
    \end{EnvGrid}
\end{center}
```
</div>
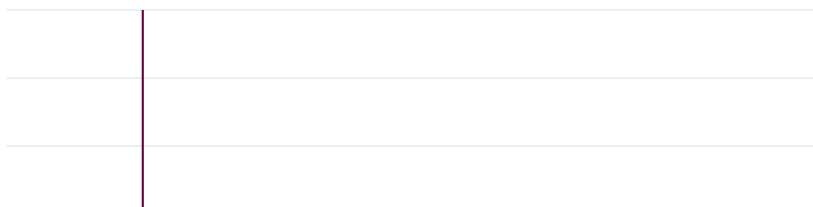
2.3 Write on the lines

The idea is to write on the created grid (environment !). In order to write *right* on the lines, we can :

- give the lines one by one ;

- avoid using multilines paragraps, items ;

- pass a line.

```
...
    %to write the lines, one by one
    \WriteLine[keys]<alignment>{text}
    %to pass the ligne
    \PassLine
...
```
Code LaTeX

The fisrt argument, *optional*, between [...] give the **⟨keys⟩** :

- **⟨OffsetH⟩**, in squares, to shift the text from the margin ;   default : **⟨0⟩**

- **⟨OffsetV⟩** to shift vertically the line ;   default : **⟨0pt⟩**

- **⟨Scale⟩** to specify the scale of the given text.   default : **⟨1⟩**

the second argument, *optional*, between <...> is the horizontal alignment (**⟨left/center/right⟩**) of the text in the basis *border*, **⟨left⟩** by default.

Le third argument, *mandatory* and between {...} is the text, eventually with options.

```
\begin{EnvGrid}[NumSquares=36x8]
    \WriteLine[Scale=1.5]{my text on ligne 1\ldots}
    \WriteLine[Scale=1.5]<center>{\ttfamily my tetetype text centered on line 2\ldots}
    \WriteLine[Scale=1.5]<right>{right-align text on line 3\ldots}
    \WriteLine[Scale=1.5,OffsetH=0.1]{\textcolor{red}{red text, 1mm-shifted\ldots}}
    \PassLine
    \WriteLine[Scale=0.5]{\sffamily sans serif text, reduced by 50\,\%, on line 6\ldots}
    \WriteLine[Scale=1.5,OffsetH=3]{\cursive 3 squares-shifted text\ldots}
\end{EnvGrid}
```
Code LaTeX

my text on ligne 1...

           my tetetype text centered on line 2...

                     right-align text on line 3...

red text, 1mm-shifted...

sans serif text, reduced by 50 %, on line 6...

     3 *square*

```
\begin{EnvGrid}[NumSquares=16x4,Margin=2,Grid=Ruled]<\ColRuled>
    \WriteLine[Scale=1.5]{\textcolor{red}{red text on line 1\ldots}}
    \WriteLine[Scale=1.15,OffsetH=1]{$(1+x)^2=1+2x+x^2$ on line 2, with 1-square offset\ldots}
    \WriteLine[OffsetH=-1]{\textcolor{blue}{blue text, back to left, on line 3\ldots}}
\end{EnvGrid}
```
Code LaTeX

red text on line 1...

       $(1+x)^2 = 1 + 2x + x^2$ on line 2, with 1-square offset...

blue text, back to left, on line 3...

Additional informations

3 Introduction

There's few other possibilities with the package WorkOnGrid, but for the moment only with *french* keys, so there's no specific documentation for these commands.

To sum up, they create full paper grid (by preference for `a4paper`), with the ability to write paragraph.

4 Example

```
                                                                    Code LaTeX
\begin{PleinePageRuled}[NumLignes]
    \LignePapierRuled[Echelle=1.25,Ligne=1]{C. PIERQUET \hfill LaTeX}
    \LignePapierRuled[Echelle=1.25,Ligne=2,Couleur=red]<center>{\underline{\cursive\bfseries Evaluation 3}}
    \CadreNoteRuled{3}
    \LignePapierRuled[Echelle=1.25,Ligne=8,Couleur=green!50!black]{\sffamily\underline{Exercise 1 :}}
    \ParagraphePapierRuled[Ligne=9]{\cursive\lipsum[1]}
    \ParagraphePapierRuled[Ligne=22]
    {%
        We try with math, $1+\frac12=\frac32$, inline, with several lines.\\
        And another math example, $\int_0^1 2x dx = 1$.\\
        A new line now !
    }
\end{PleinePageRuled}
```

<div style="color:red; text-align:center">Evaluation 3</div>
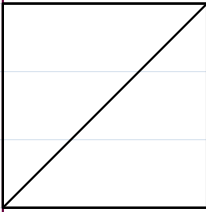
Exercise 1 :

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, ve

ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu

libero, nonummy eget, consectetuer id, vul

neque. Pellente

turpis ege

ve

cerat. Integer sapien e

sem vel leo ultrice

pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget

risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci

sit amet orci dignissim rutrum.

We try with math, $1 + \frac{1}{2} = \frac{3}{2}$, inline, with several lines.

And another math example, $\int_0^1 2x\,dx = 1$.

A new line now !

History

`v0.1.7` :	New feature for french paper PleinePageCinqCinq
`v0.1.6` :	Possibility to automatically determine L&C based on the remaining space.
`v0.1.4` :	New `[keys]` + enhancements for paragraphs, for french version (for the moment. . .)
`v0.1.4` :	`xcolor` isn't loaded with [table,svgnames])
`v0.1.3` :	Command to display a grid (w/o writing on it)
`v0.1.2` :	Shortcuts for default colors + small bugfixes
`v0.1.1` :	Best color choice
`v0.1.0` :	Initial version