

# tikz-decofonts

Simple "decoration" fonts or effects,  
made with TikZ, for small texts...

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<https://forge.apps.education.fr/pierquetcedric/packages-latex>

<https://github.com/cpierquet/latex-packages/tree/main/tikz-decofonts>

```
%paintbrush effect
\tkzbrush[color=blue]{DECORATION}
%paintink effect
\tkzink[color=orange]{DECORATION}
%pixeletter effect
\tkzpixl[color=violet]{DECORATION}
%bicolor effect
\tkzbicolor[colors=blue/red,style=ndiag]{\Huge\sffamily DECORATION}
\tkzbicolor[colors=teal/orange,style=ellips]{\Huge\sffamily DECORATION}
%surround effect
\tkzsurround[color=orange]{$I= \displaystyle\int_a^b f(x) \text{trm}{d}x = F(b)-F(a)$}
```

DECORATION

DECORATION

Decoration

DECORATION DECORATION

$$I = \int_a^b f(x)dx = F(b) - F(a)$$

Ideas and parts of codes, with CC BY-SA 4.0 licenses, come from :

- [\[link on tex.stackexchange\]](#) from user121799 for paintbrush;
- [\[link on tex.stackexchange\]](#) from user121799 for inkbrush.

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# 1 Loading, useful packages, purposes and acknowledgments

## 1.1 Loading and useful packages

In order to load `tikz-decofonts`, simply use:

```
\usepackage{tikz-decofonts}
```

Loaded packages are `tikz`, `tikz-3dplot`, `settoebox`, `xintexpr`, `simplekv`, `listofitems`, `xstring`, `ifthen` and `calc`.

Loaded `tikz`.libraries are `decorations`, `decorations.pathreplacing`, `calc`, `positioning`, `bbox`, `arrows.meta`, `shapes.callouts` and `bending`.

Globally, height of rendering is about 1cm, but some customization are available.

## 1.2 Purposes and acknowledgments

The purposes of this small package is not to provide full fonts, with all characters, but give restricted possibility to present **short** texts of title with *cute* effects.

These decorations are not destined to be use for whole paragraphs or texts, but just for fun for small titles or small texts.

Since many calculations are required internally, compilation time can be increased, so be careful with intensive use!

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- [\[link on tex.stackexchange\]](#) from user121799 for paintbrush;
- [\[link on tex.stackexchange\]](#) from user121799 for inkbrush.

Some adjustments (keys, paths) are maid from original code, but the global usage is due to the links above!

## 2 The different effects

### 2.1 Paint brush

☛ The effect is **very** *time-consuming* to compile!!

```
%only uppercase letters allowed  
\tkzbrush[color=...,lines=...,scale=...]<tikzpicture options>{short text}  
  
%color = black by default  
%lines = 12 by default  
%scale = 1 by default
```

```
%default output  
\tkzbrush{TIKZ DECORATION}
```

TIKZ DECORATION

```
%customization(s) (external file for speeding rendering ^^)  
\tkzbrush[color=red,lines=20,scale=1.5]{CUSTOM TEXT}
```

CUSTOM TEXT

## 2.2 Ink brush

```
%only uppercase letters allowed  
\tkzink[color=...,thick=...,scale=...]<tikzpicture options>{short text}  
  
%color = black by default  
%thick = 3 by default  
%scale = 1 by default
```

```
%default output  
\tkzink{TIKZ DECORATION}
```

TIKZ DECORATION

```
%customization(s)  
\tkzink[color=olive,thick=5,scale=2]{TIKZ DECORATION}
```

TIKZ DECORATION

## 2.3 Pixl brush

```
%regular letters allowed (upper and/or lower), rendered characters are 5 columns x 7 lines
\tkzpixl%
```

```
[height=...,thick=...,color=...,gridcolor=...,border=...,
offseth=...,offsetv=...,gridafter=...,nospaceafter=...]
<tikzpicture options>{short text}
```

```
\tkzpixmap%
```

```
[height=...,thick=...,color=...,gridcolor=...,border=...,
offseth=...,offsetv=...,gridafter=...,nospaceafter=...]
<tikzpicture options>{letter}
```

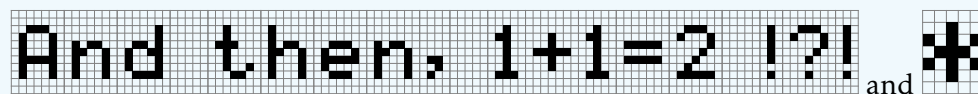
```
\tkzpixmapquote%if problem with '...
```

```
[height=...,thick=...,color=...,gridcolor=...,
offseth=...,offsetv=...,gridafter=...,nospaceafter=...]
<tikzpicture options>
```

```
%height = 11mm by default, thick = 0.1mm by default
%color = black by default, gridcolor = gray by default
%offseth = 1 by default (squares left/right of regular character)
%offsetv = 2 by default (squares above/below of regular character)
%border = false by default (boolean for adding border)
%gridafter = false by default (boolean for showing grid after pixls)
%nospaceafter = false by default (boolean for removing hspace after pixls)
```

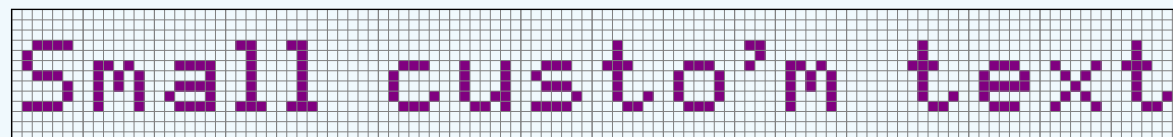
```
%default output, comparison with character w/o offsets (5*7)
```

```
\tkzpixmap{And then, 1+1=2 !?!} and \tkzpixmap[offseth=0,offsetv=0]{*}
```



```
%customization(s)
```

```
\tkzpixmap[color=violet,height=1.75cm,gridafter,offsetv=3,border]{Small custo'm text}
```



## 2.4 Bicolor effect

```
%compatible with all fonts and/or sizes
\tkzbicolor%
  [colors=...,style=...,intdelta=...]
  {text}

\tkzbicolor%with paral style
  [paralcolors=...,style=paral,intdelta=...]
  {text}

%style = midh/midv/rect/ellips/paral (paral by default)
%colors = red/blue by default,
%paralcolors = red/blue/orange/gray by default
%intdelta = 0.66 by default, percentage of int dim for ellips/rect
```

```
\def\sampleformula{\$ \displaystyle \int_0^1 \dfrac{1+x}{1+x^2} \, \mathrm{d}x \$}
\def\sampletxt{But I must explain to you how all this mistaken idea of denouncing pleasure.}
\def\samplenum{1500}
```

```
\tkzbicolor[style=midh]{\sampleformula}
or \tkzbicolor[colors=violet/magenta,style=midv]{\sampleformula}
or \tkzbicolor[colors=darkgray/olive,style=ndiag]{\sampleformula}
or \tkzbicolor[colors=orange/teal,style=sdiag]{\sampleformula}
or \tkzbicolor[colors=orange/teal,style=ellips]{\sampleformula}
or \tkzbicolor[colors=pink/violet,style=rect]{\sampleformula}
```

$$\int_0^1 \frac{1+x}{1+x^2} dx \text{ or } \int_0^1 \frac{1+x}{1+x^2} dx \text{ or } \int_0^1 \frac{1+x}{1+x^2} dx \text{ or } \int_0^1 \frac{1+x}{1+x^2} dx \text{ or } \int_0^1 \frac{1+x}{1+x^2} dx \text{ or } \int_0^1 \frac{1+x}{1+x^2} dx$$

```
\tkzbicolor[style=midh]{\sampletxt}\par
\tkzbicolor[colors=violet/magenta,style=midv]{\sampletxt}\par
\tkzbicolor[colors=darkgray/olive,style=ndiag]{\sampletxt}\par
\tkzbicolor[colors=orange/teal,style=sdiag]{\sampletxt}\par
\tkzbicolor[colors=orange/teal,style=ellips]{\sampletxt}\par
\tkzbicolor[colors=pink/violet,style=rect]{\sampletxt}
```

But I must explain to you how all this mistaken idea of denouncing pleasure.

But I must explain to you how all this mistaken idea of denouncing pleasure.

But I must explain to you how all this mistaken idea of denouncing pleasure.

But I must explain to you how all this mistaken idea of denouncing pleasure.

But I must explain to you how all this mistaken idea of denouncing pleasure.

But I must explain to you how all this mistaken idea of denouncing pleasure.

```

\tkzbicolor[style=midh]{\parbox{2.5cm}{\sampletxt}}
\tkzbicolor[colors=violet/gray,style=midv]{\parbox{2.5cm}{\sampletxt}}
\tkzbicolor[colors=darkgray/olive,style=ndiag]{\parbox{2.5cm}{\sampletxt}}
\tkzbicolor[colors=orange/cyan,style=sdiag]{\parbox{2.5cm}{\sampletxt}}
\tkzbicolor[colors=pink/violet,style=ellips]{\parbox{2.5cm}{\sampletxt}}
\tkzbicolor[colors=pink/violet,style=ellips,intdelta=0.85]{\parbox{2.5cm}{\sampletxt}}
\tkzbicolor[colors=cyan/darkgray,style=rect]{\parbox{2.5cm}{\sampletxt}}

```

But I must ex- But I must ex- But I must ex- But I must ex- But I must ex- But I must ex-  
 plain to you plain to you plain to you plain to you plain to you plain to you  
 how all this how all this how all this how all this how all this how all this  
 mistaken idea mistaken idea mistaken idea mistaken idea mistaken idea mistaken idea  
 of denouncing of denouncing of denouncing of denouncing of denouncing of denouncing  
 pleasure. pleasure. pleasure. pleasure. pleasure. pleasure.  
 But I must ex-  
 plain to you  
 how all this  
 mistaken idea  
 of denouncing  
 pleasure.

```

\tkzbicolor[style=paral]{\parbox{6cm}{\large\sffamily\sampletxt}}

```

But I must explain to you how all  
 this mistaken idea of denounc-  
 ing pleasure.

```

\tkzbicolor[style=midh]{\samplenum}\par
\tkzbicolor[colors=violet/magenta,style=midv]{\samplenum}\par
\tkzbicolor[colors=darkgray/olive,style=ndiag]{\samplenum}\par
\tkzbicolor[colors=orange/teal,style=sdiag]{\samplenum}\par
\tkzbicolor[colors=orange/teal,style=ellips]{\samplenum}

```

1500  
 1500  
 1500  
 1500  
 1500



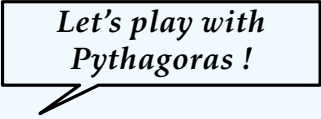
## 2.5 Comic bubble

```
%style tikz
\tikzset{comicbubble/.style args={#1#2}{%
  inner sep=1mm,line join=round,rectangle callout,draw,very thick,
  text width=#1,align=flush center,callout relative pointer=#2}}
```

```
%independant macro
\tkzcomicbubble[%
  width=...,coltxt=...,colbg=...,colframe=...,pospointer=(...),
  font=...,rcorners=true/false]%
<tikz options>{text}

%with tikzpicture environment
\begin{tikzpicture}
  %...
  \tkzcomicbubble*[%
    width=...,coltxt=...,colbg=...,colframe=...,pospointer=(...),
    font=...,rcorners=true/false]%
    <tikz options>{text}
\end{tikzpicture}
```

```
\def\mytext{Let's play with Pythagoras !\relax}
\tkzcomicbubble[font=\large\bfseries\itshape]{\mytext}~~
\tkzcomicbubble%
  [width=3cm,coltxt=red,colframe=teal,font=\bfseries,
  colbg=yellow!15,pospointer={(150:1em)},rcorners]%
  <thick>%
  {\mytext}
```



*Let's play with  
Pythagoras !*



**Let's play with  
Pythagoras !**

```
%\usepackage{setspace}
\def\mytext{Let's use Pythagoras !\relax}
{\tikz[rotate=-15,transform
  shape]\tkzcomicbubble*[width=2.5cm,font=\large\sffamily]<execute at begin
  node={\setlength{\baselineskip}{0.75\baselineskip}}>{\mytext};}
```



Let's use  
Pythagoras !

## 2.6 Surround effect

```
\tkzsurround[width=...,node=...,color=...]{text}
```

%width = width of line (1.25pt by default)

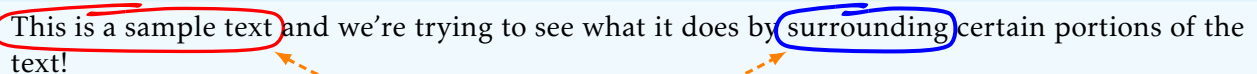
%color = red by default

%node = name of node (AAAAZ by default)

```
\tkzsurround[node=AAA]{This is a sample text} and we're trying to see what it does  
by \tkzsurround[color=blue,width=1.5pt,node=BBB]{surrounding} certain portions of the text!
```

```
{\tikz[remember picture,overlay]  
  \draw[densely dashed,orange,<->,very thick,>=latex]  
    ([yshift=-1mm]AAA.south east) to[bend right] ([yshift=-1mm]BBB.south west) ;  
}
```

This is a sample text and we're trying to see what it does by surrounding certain portions of the text!



## 2.7 Underline effect

```
\tkzunderline[width=...,node=...,color=...,height=...]{text}
```

%width = width of line (1.25pt by default)

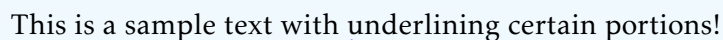
%color = red by default

%height = global height of underlining (10mm by default)

%node = name of node (AAAAZ by default)

```
\tkzunderline{This is a sample text} with  
\tkzunderline[color=blue,width=1.5pt,height=15mm]{underlining} certain  
\tkzunderline[color=yellow,width=1pt,height=15pt]{portions}!
```

This is a sample text with underlining certain portions!



## 2.8 Arrow with fitted text

```
\tkzbrush[<keys>]<tikzpicture options>{text}

%color      = color of arrow (gray)
%txtcolor   = color of text (white)
%width      = width 'with or without ending' width of arrow (2cm)
%bheight    = big height (8mm)
%sheight    = small height (4mm)
%hoffset    = text h offset (0.2mm)
%shadow     = boolean for shadow (true)
%shownodes  = boolean for helping nodes (false)
%expand     = use 'max' width for txt (false)
%globalwidth = boolean for width including 'ending' (false)
```

Nodes (eg for positionning) are:

- arrow-bottomleft
- arrow-topleft
- arrow-begin
- arrow-end
- arrow-textcenter
- arrow-bottom
- arrow-textright
- arrow-top
- arrow-smallbottom
- arrow-smalltop

```
\tkzfittextinarrow%
[bheight=3cm,sheight=1.75cm,width=6cm,color=orange,shownodes]%
{\vphantom{q}Demo}
```



```
\tkzfittextinarrow%
[bheight=3cm,sheight=1.75cm,width=6cm,color=teal,globalwidth,expand,txtcolor=yellow]%
{\vphantom{q}\bfseries\sffamily Demo}
```



```
\tkzfittextinarrow%
  [bheight=2cm,sheight=1cm,width=5cm,color=orange,expand]%
  {\vphantom{q}Démonstration}
```



Text before

```
\tkzfittextinarrow%
  [bheight=1em,sheight=0.6em,width=3em,color=green!50!black]%
  <rotate=-15,baseline=(arrow-smallbottom)>%
  {\itshape My examples}
\tkzfittextinarrow%
  [bheight=1em,sheight=0.6em,width=3em,color=green!50!black,expand]%
  <rotate=15,baseline=(arrow-textcenter)>%
  {\ttfamily My examples}
```

with text after

Text before   with text after



## 2.9 Freehand circled text


```
\tkzcircledtxt[<keys><tikzpicture options>]{text}
```


%height	= height for manual insertion (2em)
%width	= width for manual insertion (2.3em)
%thickness	= thickness, percentage of height (0.05)
%absolute thickness	= absolute thickness, length (-)
%fill color	= bg color (lightgray!30)
%rule color	= boxrule color (black)
%rotate	= optional rotation (0)
%auto	= auto width/height/raise relative to len of inside text (0)
%fill	= boolean for filling (true)
%font	= optional font
%vstretch	= coefficient for vertical stretch, with auto usage (1.5)
%hoffset	= coefficient for horizontal offset with auto usage (0.8)
%random	= boolean for random effect (false)
%arabic	= boolean for arabic version of counter (false)
%alph	= boolean for alph version of counter (false)
%Alph	= boolean for Alpha version of counter (false)

%manual insertion (height + width + font)

```
{q\Huge\sffamily\bfseries\tkzcircledtxt{99}\tkzcircledtxt[absolute thickness=1pt]{99}H}\
{q\Huge\sffamily\bfseries\tkzcircledtxt[random]{99}H}\
{q\Huge\sffamily\bfseries\tkzcircledtxt[random]{text}H}
```



q   H



q  H



q  H

%automatic insertion relative to len of small text

```
{\Huge q\tkzcircledtxt[auto=1]{7}H or q\tkzcircledtxt[auto=2]{7}H}\
{\Huge q\tkzcircledtxt[auto=2]{99}H or q\tkzcircledtxt[auto=3]{99}H}\
{\Huge q\tkzcircledtxt[auto=2]{154}H or q\tkzcircledtxt[auto=3]{154}H }
```

q  H or q  H

q  H or q  H

q  H or q  H

%with custom font

```
{\Huge\sffamily q\tkzcircledtxt[font=\small\ttfamily,auto=3]{105}H}
```

q  H

`\tkzcircledtxt[auto=1]{7}` Let  $f(x)=x^2+5x-3$ .

⑦ Let  $f$  defined by  $f(x) = x^2 + 5x - 3$ .

```
%with enumitem package
\begin{enumerate}[label={%
  \color{darkgray}%
  \tkzcircledtxt[thickness=0.075,fill=false,arabic,font=\large\bfseries,auto=1,%
    fill color=teal!25,rule color=orange]{\arabic*}%
  }%
]
\item AAF
\item AAF
\begin{enumerate}[label={%
  \color{red}%
  \tkzcircledtxt[thickness=0.0375,fill=false,offset=0.25,alph,%
    font=\bfseries,auto=1,rule color=teal]{\alph*}%
  }%
]
\item AA
\item BGHMG
\end{enumerate}
\end{enumerate}
\item AAF
\item AAF
\item AAF
\item AAF
\item AAF
\item AAF
\item AAF
\end{enumerate}
```

- ① AAF
- ② AAF
  - Ⓐ AA
  - Ⓑ BGHMG
- ③ AAF
- ④ AAF
- ⑤ AAF
- ⑥ AAF
- ⑦ AAF
- ⑧ AAF
- ⑨ AAF

## 2.10 Block (3D) of letters

```
\tkzcircledtxt[<keys><tikzpicture options>{list of blocks}
```

```
%height      = height dim or auto/dauto for inline usage (dauto)
%hstretch     = h sep coefficient (1.05)
%spacestretch = space sep coefficient (0.25)
%dstrut       = characters for dauto usage (qH)
%strut        = characters for auto usage (H)
%font         = font for labels (\huge\bfseries\sffamily)
```

```
%list of blocks within letter1/colorblock1/colorletter1,...
%use * for 'space'
```

```
{\LARGE%
q%
\tkzletterblock%
{%
  C/red/white,H/blue/white,A/violet/white,%
  P/yellow/black,T/white/black,E/orange/black,%
  R/teal/white,*/magenta/white,0/cyan/white,7/pink/white%
}%
H%
}
```

q C H A P T E R 0 7 H

```
\sffamily\bfseries\Huge%
H%
\tkzletterblock%
[height=auto]%
{%
  L/red/white,A/blue/white,T/violet/white,E/cyan/white,X/pink/white%
}%
H
```

H L A T E X H

```
%green lines for visualizing manual height
{\tikz\draw[thick,green] (0,0)--(0,1.75cm);}
\tkzletterblock%
[height=1.75cm,hstretch=1.25,font=\Huge\ttfamily,spacestretch=0.5]%
{%
  D/yellow/black,E/white/black,*//,C/orange/black,0/teal/white%
}%
{\tikz\draw[thick,green] (0,0)--(0,1.75cm);}

```

D E C O

## 2.11 Underline with pen pictogram

```
%main macro
\tkzunderlinepen[keys]{text}
%macro with hphantom of pen
\phantomulnewithpen

%thick          = thickness (0.8pt)
%color          = color for underling
%chardepth      = characters for depth calculus
%vstretchoffset = float for raising depth (0.5)
%scale          = scale of pen (1)
%swap           = boolean for 'downside' version (false)
```


```
\tkzunderlinepen{Exercise n°1}\par
\lipsum[1][1-3]

\tkzunderlinepen[swap]{Exercise n°1}\par
\phantomulnewithpen\lipsum[1][1-3]
```

### Exercise n°1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris.

### Exercise n°1

 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris.

```
{\bfseries\sffamily\LARGE\textcolor{blue}{\tkzunderlinepen[thick=1pt]{Exercise n°2}}}\par
\lipsum[1][1-3]

{\bfseries\sffamily\LARGE\textcolor{violet}{\tkzunderlinepen[color=teal]{Exercise n°3}}}\par
\lipsum[1][1-3]

{\bfseries\sffamily\LARGE\textcolor{brown}{\tkzunderlinepen[color=orange]{Exercise
  (important) n°4}}}\par
\lipsum[1][1-3]
```

### Exercise n°2

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris.

### Exercise n°3

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris.

### Exercise (important) n°4

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris.



### 3 History

0.1.8: Pen-underline  
0.1.7: AlphabetCubes  
0.1.6: Thickness for 'freehand' circled text  
0.1.5: Small 'freehand' circled text  
0.1.4: Arrow with fitted text  
0.1.3: Underline or surround effect  
0.1.2: Comic bubble  
0.1.1: Bicolor effect  
0.1.0: Initial version