

LaTeX-cursus 2021

Week 3: Getting started

TeXniCie

26 oktober 2021

Lore*m ipsum* \tiny dolor sit amet, consectetur adipiscing elit. Phasellus elementum, lacus quis tempus scelerisque, elit diam vulputate ex, semper elementum massa odio in ante.

Lore*m ipsum* dolor sit amet, consectetur adipiscing elit. Phasellus elementum, lacus quis tempus scelerisque, elit diam vulputate ex, semper elementum massa odio in ante.

```
 Lorem {ipsum \tiny dolor sit amet, consectetur
adipiscing elit. Phasellus {elementum}, lacus quis
tempus scelerisque, {elit diam vulputate ex, semper}
elementum massa odio in ante.
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus elementum,
 lacus quis tempus scelerisque, elit diam vulputate ex, semper elementum
 massa odio in ante.

{ } | \textbackslash

Speciale tekens

Code	Resultaat	Code	Resultaat
\{	{	{	Begin groep
\}	}	}	Eindig groep
\%	%	%	Comment
_	_	-	Betekenis voor wiskunde
\textasciicircum	^	~	Betekenis voor wiskunde
\\$	\$	\$	Wiskundemodus
\textbackslash	\	\	Commando
\&	&	&	Kolomscheiding
\#	#	#	Parameter
\textgreater	>	>	>
\textless	<	<	<

Speciale tekens

Code	Resultaat	Code	Resultaat
\{	{	{	Begin groep
\}	}	}	Eindig groep
\%	%	%	Comment
_	_	-	Betekenis voor wiskunde
\textasciicircum	^	~	Betekenis voor wiskunde
\\$	\$	\$	Wiskundemodus
\textbackslash	\	\	Commando
\&	&	&	Kolomscheiding
\#	#	#	Parameter
\textgreater	>	>	>
\textless	<	<	<

Comments

```
% Make soul package work in beamer presentations
% Source: https://tex.stackexchange.com/...
\let\UL\ul
\makeatletter
\renewcommand\ul{
    \let\set@color\beamerorig@set@color
    \let\reset@color\beamerorig@reset@color
    \UL
}
...
...
```

{ } | \textbackslash

Comments

```
% TODO Translate to English
\section{Nonsense}

Lorem ipsum dolor sit amet,
\textfb{ornare} sit amet.

\subsection{About  $\sqrt{2}$ }
```

Error! Undefined control sequence

{ } | \textbackslash

Comments

```
% TODO Translate to English
\section{Nonsense}

%Lorem ipsum dolor sit amet,
%\textfb{ornare} sit amet.
%
%\subsection{About $ \sqrt{2} $}
```

1 Nonsense

{ } | \textbackslash

Comments

```
% TODO Translate to English
\section{Nonsense}

Lorem ipsum dolor sit amet,
\textfb{ornare} sit amet.

%\subsection{About $ \sqrt{2} $}
```

Error! Undefined control sequence

Comments

```
% TODO Translate to English
\section{Nonsense}

Lorem ipsum dolor sit amet,
\textbf{ornare} sit amet.

\subsection{About  $\sqrt{2}$ }
```

1 Nonsense

Lorem ipsum dolor sit amet,
ornare sit amet.

1.1 About $\sqrt{2}$

{ } | \textbackslash textbackslash | ` '

Aanhalingstekens

'LaTeX' : 'LaTeX'

`LaTeX' : 'LaTeX'

``LaTeX' ': "LaTeX"

{ } | \textbackslash | `.....' | \newcommand

\newcommand

```
\newcommand\aa{aa: ()}
\newcommand\bb[1]{bb: (#1)}
\newcommand\cc[2]{cc: (#1,#2)}
\newcommand\dd[3]{dd: (#1,#2,#3)}
\newcommand\ee[3][Z]{ee: (#1,#2,#3)}

Lorem \aa, \bb{A}, \cc{A}{B}, \dd{A}{B}{C},
\ee{A}{B}, \ee[A]{B}{C}, \ee ABC. %$ \frac{2}{\sqrt{3}} $
```

Lorem aa: (), bb: (A), cc: (A,B), dd: (A,B,C), ee: (Z,A,B), ee: (A,B,C), ee: (Z,A,B)C.

{ } | \textbackslash | `....' | \newcommand

\newcommand

```
\newcommand\co{CO$_2$}
\newcommand\term[1]{\textcolor{blue}{\textit{#1}}}

Lorem ipsum \co{} dolor sit amet \co.
Duis \term{iaculis} id orci eu mattis.
\term{Suspendisse facilisis.}
```

Lorem ipsum CO₂ dolor sit amet CO₂. Duis *iaculis* id orci eu mattis.
Suspendisse facilisis.

{ } | \textbackslash | `.....' | \newcommand

\newcommand

```
\newcommand\genummerd[3][.]{\textbf{\#2}\leaders
\hbox{\#1}\hfill #3}

\genummerd{AA}{6}\par
\genummerd{Lorem ipsum}{12}\par
\genummerd{Amet}{20}\par
\genummerd[-]{Vivamus}{20}
```

AA	6
Lorem ipsum	12
Amet	20
Vivamus -----	20

{ } | \textbackslash | `.....' | \newcommand

\newcommand

```
\newcommand\genummerd[3]{.}{\par\textrm{\bfseries}{#2}\hspace{0.2em}\leaders\hbox{\hfil}\hfill\hbox to 1.55em{\hfil #3}\par}\genummerd{AA}{6}\genummerd{Lorem ipsum}{12}\genummerd{Amet}{20}\genummerd[-]{Vivamus}{20}\genummerd[Hoi!]{Vivamus}{20}
```

AA	6
Lorem ipsum	12
Amet	20
Vivamus	-----	20
Vivamus	Hoi!Hoi!Hoi!Hoi!Hoi!Hoi!Hoi!Hoi!Hoi!Hoi!	20

{ } | \textbackslash | `.....' | \newcommand

\renewcommand

```
\renewcommand\thesection{007}
\renewcommand\thesubsection{Yo}
\section{AA}
\subsection{BB}
\subsection{CC}
\subsubsection{DD}
```

007 AA

Yo BB

Yo CC

Yo.1 DD

Yo.2 EE

{ } | \textbackslash | `.....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{tot}`

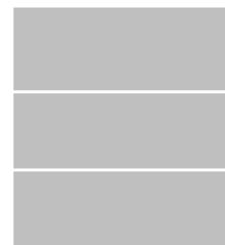
Correct



Foutief

Hint

Correct



Code A

Code B



{ } | \textbackslash | `.....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{\text{tot}}`

$$\vec{F}_{tot}$$

Correct



Foutief



Hint



Correct



Code A



Code B



{ } | \textbackslash | `....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{\text{tot}}`

$$\vec{F}_{tot}$$

Correct `\vec{F}_{\text{\text{tot}}}`

$$\vec{F}_{tot}$$

Foutief



Hint



Correct



Code A



Code B



{ } | \textbackslash | `.....' | \newcommand

Subscript/superscript: Inzichtsvragen

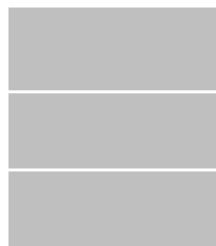
Foutief `\vec{F}_{\text{tot}}`

$$\vec{F}_{tot}$$

Correct `\vec{F}_{\text{\text{tot}}}`

$$\vec{F}_{tot}$$

Foutief `\vec{F_{\text{tot}}}}`



Hint



Correct



Code A



Code B



{ } | \textbackslash | '....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{\text{tot}}`

$$\vec{F}_{tot}$$

Correct `\vec{F}_{\text{\text{tot}}}`

$$\vec{F}_{tot}$$

Foutief `\vec{F_{\text{tot}}}}`



Hint `\vec{abc}`

$$\vec{abc} \quad \boxed{\vec{abc}}$$

Correct



Code A



Code B



{ } | \textbackslash textbackslash | `.....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{\text{tot}}`

$$\vec{F}_{\text{tot}}$$

Correct `\vec{F}_{\text{\text{tot}}}`

$$\vec{F}_{\text{tot}}$$

Foutief `\vec{F}_{\text{\text{tot}}}}`

$$\vec{F}_{\text{tot}} \boxed{\vec{F}_{\text{tot}}}$$

Hint `\vec{abc}`

$$\vec{abc} \boxed{\vec{abc}}$$

Correct 



Code A 



Code B 



{ } | \textbackslash | `....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{\text{tot}}` \vec{F}_{tot}

Correct `\vec{F}_{\text{\text{tot}}}` \vec{F}_{tot}

Foutief `\vec{F}_{\{\text{tot}\}}` $\vec{F}_{\text{tot}} \boxed{\vec{F}_{\text{tot}}}$

Hint `\vec{abc}` $\vec{abc} \boxed{\vec{abc}}$

Correct `\vec{F}_{\text{\text{tot}}}` $\vec{F}_{\text{tot}} \boxed{\vec{F}_{\text{tot}}}$

Code A 



Code B 

{ } | \textbackslash textbackslash | `.....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{\text{tot}}` \vec{F}_{tot}

Correct `\vec{F}_{\text{\text{tot}}}` \vec{F}_{tot}

Foutief `\vec{F}_{\text{\text{tot}}}}` \vec{F}_{tot} \vec{F}_{tot}

Hint `\vec{abc}` \vec{abc} \vec{abc}

Correct `\vec{F}_{\text{\text{tot}}}}` \vec{F}_{tot} \vec{F}_{tot}

Code A `x_0^2`



Code B `{x_0}^2`

{ } | \textbackslash textbackslash | `.....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{\text{tot}}` \vec{F}_{tot}

Correct `\vec{F}_{\text{\text{tot}}}` \vec{F}_{tot}

Foutief `\vec{F}_{\text{\text{tot}}}}` \vec{F}_{tot} \vec{F}_{tot}

Hint `\vec{abc}` \vec{abc} \vec{abc}

Correct `\vec{F}_{\text{\text{tot}}}}` \vec{F}_{tot} \vec{F}_{tot}

Code A `x_0^2` x_0^2

Code B `{x_0}^2` 

{ } | \textbackslash textbackslash | `.....' | \newcommand

Subscript/superscript: Inzichtsvragen

Foutief `\vec{F}_{tot}` \vec{F}_{tot}

Correct `\vec{F}_{\text{tot}}` \vec{F}_{tot}

Foutief `\vec{F}_{\text{\text{tot}}}` $\vec{F}_{\text{tot}} \quad \vec{F}_{\text{tot}}$

Hint `\vec{abc}` $\vec{abc} \quad \vec{abc}$

Correct `\vec{F}_{\text{tot}}` $\vec{F}_{\text{tot}} \quad \vec{F}_{\text{tot}}$

Code A `x_0^2` x_0^2

Code B `{x_0}^2` x_0^2

Footnote

```
 Lorem ipsum\footnote{Dit tekstje zie je hier  
vaak\textellipsis} dolor sit amet. Nunc metus ...  
erat.\footnote{\emph{Zeer} interessant.} Aenean ...
```

Lorem ipsum¹ dolor sit amet. Nunc metus tortor, mattis et velit vitae, convallis hendrerit erat.² Aenean est purus, faucibus nec metus nec, ullamcorper mollis augue. Nam ac nibh nec felis semper malesuada. Nullam sit amet turpis risus. Nunc iaculis pharetra velit et vulputate.

¹Dit tekstje zie je hier vaak...

²Zeer interessant.

Alinea's

```
 Lorem ipsum dolor sit amet,  
 ... ornare sit amet.  
 In ipsum ante, sollicitudin  
 ... sit amet augue.
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer id erat leo. Suspendisse sit amet ligula turpis. Duis congue turpis odio, non ornare elit ornare sit amet. In ipsum ante, sollicitudin at euismod vitae, tincidunt vitae massa. Aenean metus lectus, porta at tempor at, dapibus sit amet augue.

Alinea's

Lorem ipsum dolor sit amet,
 ... ornare sit amet.
 In ipsum ante, sollicitudin
 ... sit amet augue.

Lorem ipsum dolor sit amet,
 ... ornare sit amet.

In ipsum ante, sollicitudin
 ... sit amet augue.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer id erat leo. Suspendisse sit amet ligula turpis. Duis congue turpis odio, non ornare elit ornare sit amet. In ipsum ante, sollicitudin at euismod vitae, tincidunt vitae massa. Aenean metus lectus, porta at tempor at, dapibus sit amet augue.

Alinea's

Lorem ipsum dolor sit amet,
 ... ornare sit amet.
 In ipsum ante, sollicitudin
 ... sit amet augue.

Lorem ipsum dolor sit amet,
 ... ornare sit amet.
 In ipsum ante, sollicitudin
 ... sit amet augue.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer id erat leo. Suspendisse sit amet ligula turpis. Duis congue turpis odio, non ornare elit ornare sit amet. In ipsum ante, sollicitudin at euismod vitae, tincidunt vitae massa. Aenean metus lectus, porta at tempor at, dapibus sit amet augue.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer id erat leo. Suspendisse sit amet ligula turpis. Duis congue turpis odio, non ornare elit ornare sit amet.

In ipsum ante, sollicitudin at euismod vitae, tincidunt vitae massa. Aenean metus lectus, porta at tempor at, dapibus sit amet augue.

Algemeen
oooooooooooo

Whitespace
o●ooooo

Counters
ooo

Pagina
oooooooo

Class 'inleveropgave'
o

Boxes
ooooooo

Extra's
ooooooo

{ } | \textbackslash | `....' | \newcommand | \footnote | witregel | \noindent

Alinea's

```
\noindent Lorem ipsum dolor  
sit amet, ... ornare sit  
amet.
```

```
In ipsum ante, sollicitudin  
... sit amet augue.
```

Alinea's

```
\noindent Lorem ipsum dolor  
sit amet, ... ornare sit  
amet.
```

```
In ipsum ante, sollicitudin  
... sit amet augue.
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer id erat leo. Suspendisse sit amet ligula turpis. Duis congue turpis odio, non ornare elit ornare sit amet.

In ipsum ante, sollicitudin at euismod vitae, tincidunt vitae massa. Aenean metus lectus, porta at tempor at, dapibus sit amet augue.

\footnote | witregel | \noindent | \vspace

Alinea's

```
 Lorem ipsum dolor sit amet,  
 ... ornare sit amet.
```

```
\vspace{1cm}
```

```
 In ipsum ante, sollicitudin  
 ... sit amet augue.
```

(Steeds parskip vanaf nu)

Lore ipsum dolor sit amet, consectetur adipiscing elit. Integer id erat leo. Suspendisse sit amet ligula turpis. Duis congue turpis odio, non ornare elit ornare sit amet.

In ipsum ante, sollicitudin at euismod vitae, tincidunt vitae massa. Aenean metus lectus, porta at tempor at, dapibus sit amet augue.

Alinea's

```
...
\usepackage{parskip}
\begin{document}
Lorem ipsum dolor sit amet,
... ornare sit amet.

In ipsum ante, sollicitudin
... sit amet augue.
\end{document}
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer id erat leo. Suspendisse sit amet ligula turpis. Duis congue turpis odio, non ornare elit ornare sit amet.

In ipsum ante, sollicitudin at euismod vitae, tincidunt vitae massa. Aenean metus lectus, porta at tempor at, dapibus sit amet augue.

Algemeen
oooooooooooo

Whitespace
oooo●oo

Counters
ooo

Pagina
oooooooo

Class 'inleveropgave'
o

Boxes
ooooooo

Extra's
ooooooo

\footnote | witregel | \noindent | \vspace | parskip

Spaties en overzichtelijke code: de verkeersregels

Nope: `\includegraphics[width=0.9\textwidth]{ afbeelding.jpg }`

Ok

```
\includegraphics[  
    width= 0.9 \textwidth  
]{afbeelding.jpg}
```

Nope

```
\includegraphics[  
    width= 0.9 \textwidth  
]{afbeelding.jpg}
```

Spaties en overzichtelijke code: de verkeersregels

Ok

```
\usepackage{  
    parskip,  
    hyperref  
}
```

Ok

```
\begin{center}  
    AA  
\end{center}  
\begin{center}  
    BB  
\end{center}  
\begin{center}CC\end{center}
```

Algemeen
oooooooooooo

Whitespace
ooooooo●

Counters
ooo

Pagina
oooooooo

Class 'inleveropgave'
o

Boxes
ooooooo

Extra's
ooooooo

\footnote | witregel | \noindent | \vspace | parskip

Spaties

■ auuuuubuc

a b c.

Spaties

- $a\underline{\hspace{1cm}}\underline{\hspace{1cm}}\underline{\hspace{1cm}}b\underline{\hspace{1cm}}c$ a b c.
 - $a\underline{\hspace{1cm}}\underline{\hspace{1cm}}\underline{\hspace{1cm}}\underline{\hspace{1cm}}b\underline{\hspace{1cm}}c$ a b c.

Spaties

- a\uuuuu b\u c a b c.
 - a\ u\ u\ u\ u b\u c a b c.
 - a\quad b c\,,d\;e a b c d e
 - a\hspace{2cm}b a b

Spaties

- auuuuubc a b c.
- a______bc a b c.
- a\quad b c\,,d\;e a b c d e
- a\hspace{2cm}b a b
- Ik kan \LaTeX schrijven! Ik kan \text{\LaTeX} schrijven!
- Vincent is lid van de \TeX niCie. Vincent is lid van de \text{\TeX}niCie.

Spaties

- `a\uuuuu\u b\u c` a b c.
- `a__ __ __ __ b\u c` a b c.
- `a\quad b c\,,d\;e` a b c d e
- `a\hspace{2cm}b` a b
- Ik kan `\LaTeX` schrijven! Ik kan `\LaTeX`schrijven!
- Vincent is lid van de `\TeX` niCie. Vincent is lid van de `\TeX`niCie.
- Ik kan `\LaTeX{}` schrijven! Ik kan `\LaTeX` schrijven!

Spaties

- `a\uuuuu\u b\u c` a b c.
- `a__ __ __ __ b\u c` a b c.
- `a\quad b c\,,d\;e` a b c d e
- `a\hspace{2cm}b` a b
- Ik kan `\LaTeX` schrijven! Ik kan \LaTeX schrijven!
- Vincent is lid van de `\TeX` niCie. Vincent is lid van de \TeX niCie.
- Ik kan `\LaTeX{}` schrijven! Ik kan \LaTeX schrijven!
- ---

`Haloo\u ik
ben\u \text{ellipsis}.` Hallo ik ben
- ---

`Haloo\u ik%
ben\u \text{ellipsis}.` Hallo ikben

\footnote | witregel | \noindent | \vspace | parskip

\setcounter

1 AA

5 BB

5.8 CC

6 DD

6.1 EE

\section{AA}
\setcounter{section}{4}
\section{BB}
\setcounter{subsection}{7}
\subsection{CC}
\section{DD}
\subsection{EE}

Counter-inspectie

1 AA

Counters: 1.0, 0,

1.1 BB

Counters: 1.1, 1, i

1.2 CC

Counters: 1.2, 2, ii

```
\section{AA}
Counters: \thesubsection,
\arabic{subsection},
\roman{subsection}
```

```
\subsection{BB}
Counters: \thesubsection,
\arabic{subsection},
\roman{subsection}
```

```
\subsection{CC}
Counters: \thesubsection,
\arabic{subsection},
\roman{subsection}
```

Counter-formatting

1 AA

(1)a BB

(1)b CC

(1)c DD

2 EE

(2)a FF

```
\renewcommand{\thesubsection}{(\thesection)\alph{subsection}}  
  
\section{AA}  
\subsection{BB}  
\subsection{CC}  
\subsection{DD}  
\section{EE}  
\subsection{FF}
```

Counter-formatting

1 AA

(1)a BB

(1)b CC

(1)c DD

2 EE

(2)a FF

1 AA

1.1 BB

1.2 CC

1.3 DD

2 EE

2.1 FF

Pagina lay-out en dimensies

```
\fancyhead[L]{ } \fancyhead[C]{ } \fancyhead[R]{ }
```

1 Lorem ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Suspendisse tincidunt eleifend enim, ut pharetra mi.

```
\usepackage{geometry}
\usepackage{fancyhdr}

\geometry{
    a6paper,
    %landscape,
    margin=2cm,
    left=1cm,
    right=1cm,
    paperheight=12cm
}

\pagestyle{fancy}
\fancyhead[L]{Linksboven!}
\begin{document}
...
\end{document}
```

```
\fancyfoot[L]{ } \fancyfoot[C]{ } \fancyfoot[R]{ }
```

```
\usepackage{geometry}
\usepackage{fancyhdr}
```

```
\geometry{
    a6paper,
    landscape,
    margin=2cm,
    left=1cm,
    paperheight=12cm
}
```

```
\pagestyle{fancy}
\fancyhead[L]{Linksboven!}
```

twocolumn

Kom bij de TeXniCie!

3 SETUP AND METHOD

Nunc feugiat purus lorem, in pulvinar leo accumsan quis. Maecenas tristique sollicitudin venenatis. Phasellus imperdiet urna quis augue ornare condimentum. Cras euismod nisi convallis ipsum ultricies aliquet. Suspendisse accumsan vulputate accumsan. Aliquam vehicula sapien quis egestas venenatis. Nam suscipit imperdiet eros eget finibus. Interdum et malesuada fames ac ante ipsum primis in faucibus. Quisque porta ultricies eros nec po-

tas. Cras a convallis mi, a finibus felis. Nunc quis nisi non magna tincidunt tincidunt. Maecenas cursus, velit non dapibus gravida, quam dui condimentum leo, ac egestas tellus sem a est. Pellentesque convallis sollicitudin commodo. Nulla non viverra sapien.

Etiam sit amet neque rutrum, semper ex et, vehicula diam. Aliquam iaculis dignissim accumsan. Integer vel suscipit ligula, at efficitur nulla. Proin iaculis quam at

```
\documentclass[a4paper,twocolumn]{article}
\usepackage[margin=2.54cm]{geometry}
\usepackage{fancyhdr}
\pagestyle{fancy}
```

Standalone

```
% Bestand: prachtigeformule.tex
\documentclass{standalone}
\usepackage{amsmath,amssymb}

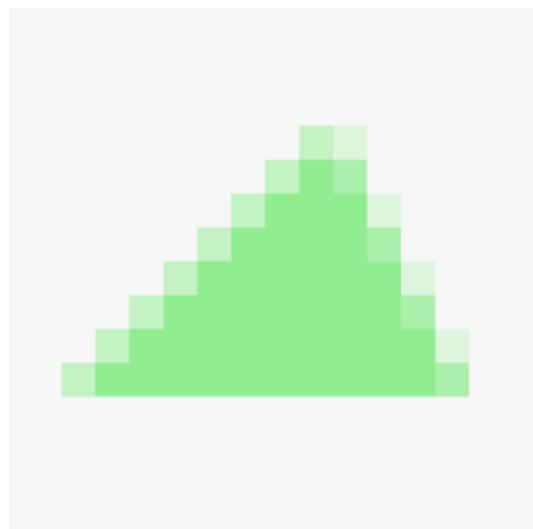
\begin{document}
$ \displaystyle \sum_{k=0}^{\infty} \frac{x^k}{k!} = e^x $
\end{document}
```

\includegraphics[...]{prachtigeformule.pdf}

$$\sum_{k=0}^{\infty} \frac{x^k}{k!} = e^x$$

Raster vs vector graphics

Raster (.png, .jpg, .jpeg, .bmp)



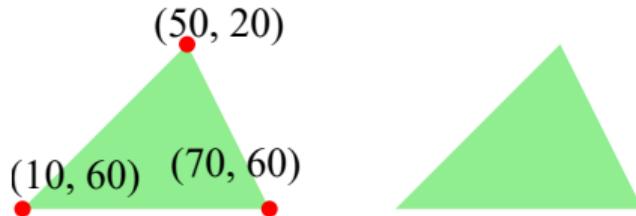
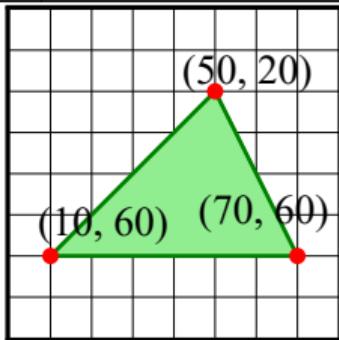
Vector (.pdf, .svg, .dvi, .ps)



Raster vs vector graphics

assets > images >  vector_vs_raster-vector.svg

```
1 <svg version="1.1"
2   width="80" height="80"
3   xmlns="http://www.w3.org/2000/svg"
4   <path d="M50 20 L70 60 L10 60 Z" fill="lightgreen" />
5 </svg>
6
```



\footnote

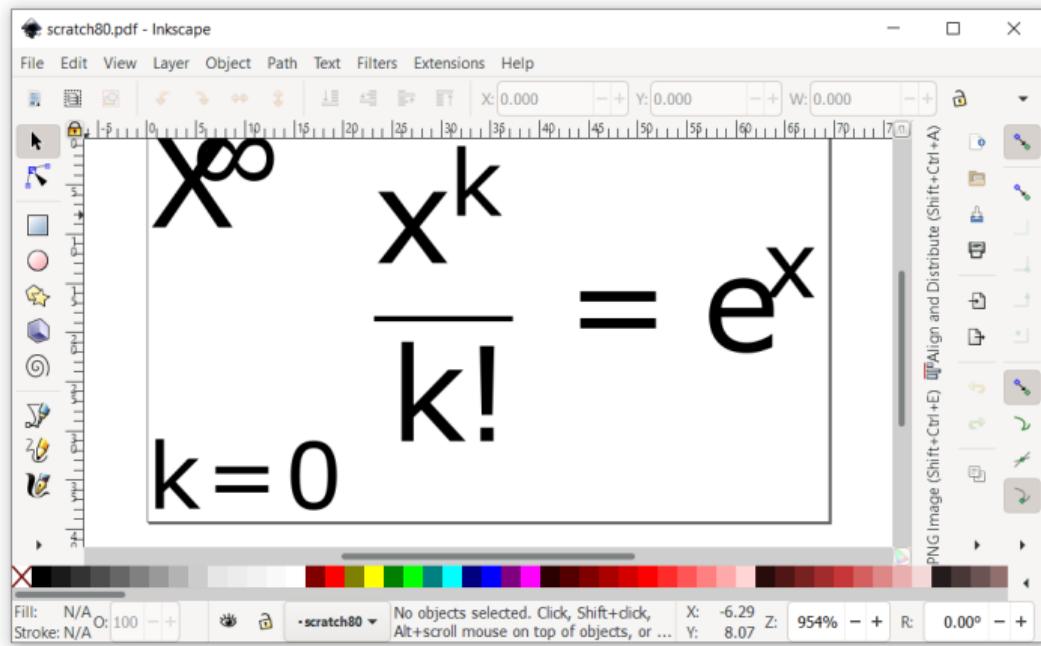
witregel

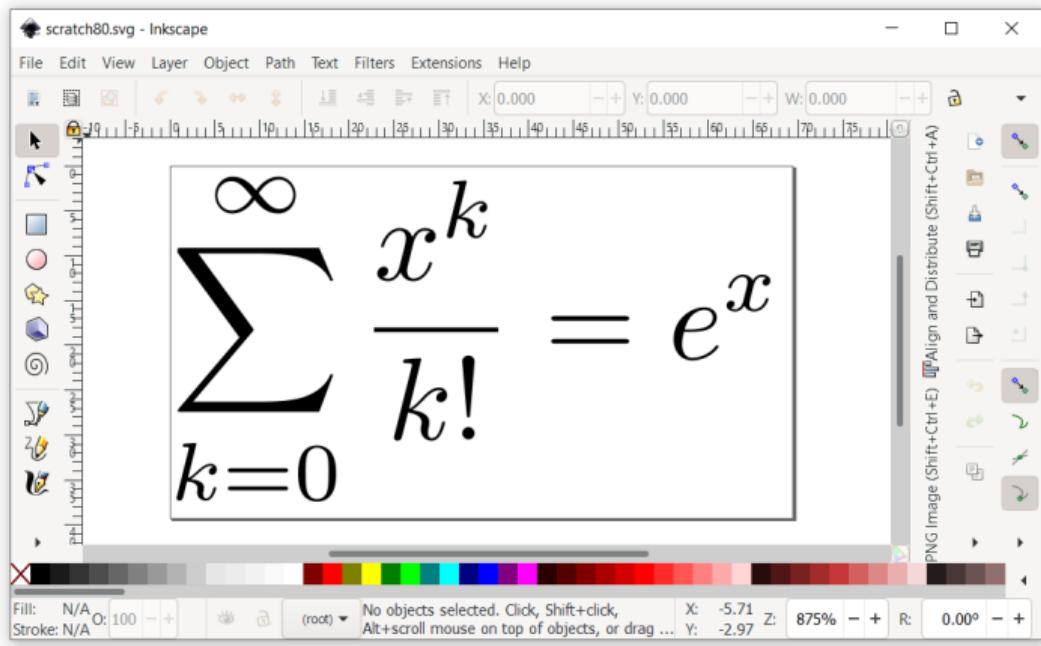
\noindent

\vspace

parskip

twocolumn





Algemeen
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Whitespace
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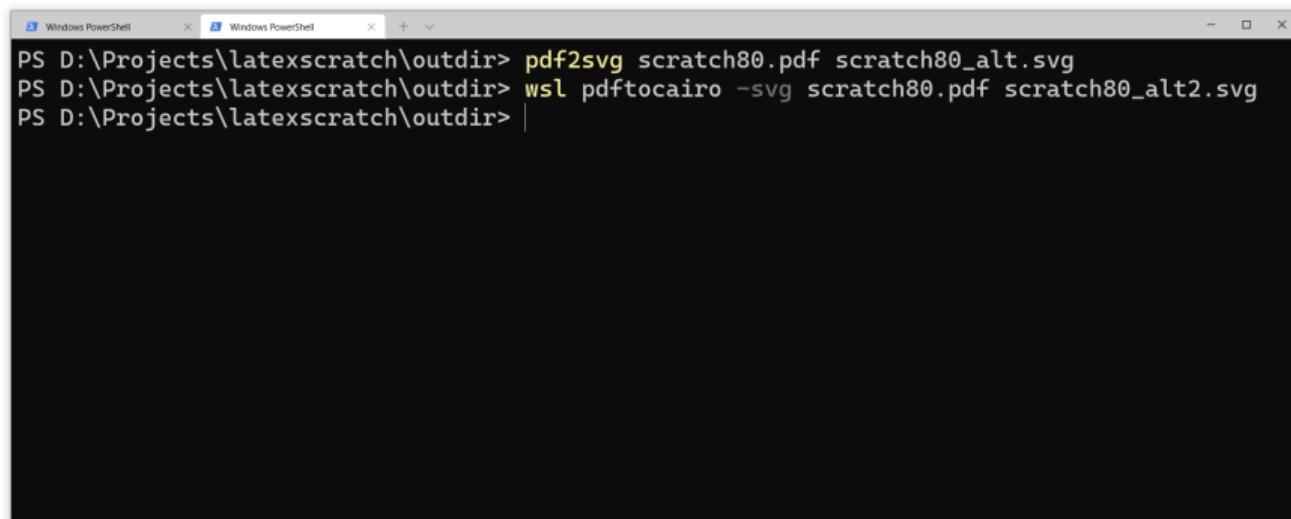
Pagina
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Class 'inleveropgave'
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Boxes
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Extra's
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\footnote | witregel | \noindent | \vspace | parskip | twocolumn



```
PS D:\Projects\latexscratch\outdir> pdf2svg scratch80.pdf scratch80_alt.svg
PS D:\Projects\latexscratch\outdir> wsl pdftocairo -svg scratch80.pdf scratch80_alt2.svg
PS D:\Projects\latexscratch\outdir>
```

Converteren van pdf naar svg met `pdf2svg` of met package `pdftocairo`.
Voor laatste is Linux/Mac nodig of Windows Subsystem for Linux.

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```
pdf2svg scratch80.pdf scratch80_alt.svg
wsl pdftocairo -svg scratch80.pdf scratch80_alt2.svg
```

Converteren van pdf naar svg met `pdf2svg` of met package `pdftocairo`.
Voor laatste is Linux/Mac nodig of Windows Subsystem for Linux.

4.1.4 1-forms as $C^\infty(M)$ -linear functionals eating vector fields

While covectors of a vector space V take vectors to real numbers, 1-forms take vector given ω as above and $X \in \mathfrak{X}(M)$, evaluating ω_p on X_p for each $p \in M$ we obtain a smc

$$\omega(X) \in \mathcal{C}^\infty(M);$$

(why smooth?). When we vary X it is clear that the resulting map, still denoted by ω ,

$$\omega : \mathfrak{X}(M) \rightarrow \mathcal{C}^\infty(M)$$

is $C^\infty(M)$ -linear, i.e. it is linear and

$$\omega(f \cdot X) = f \cdot \omega(X) \quad \text{for all } f \in \mathcal{C}^\infty(M), X \in \mathfrak{X}(M).$$

4.1.4 1-forms as $C^\infty(M)$ -linear functionals eating vector fields

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$$\omega(fX) = f \cdot \omega(X) \quad \text{for all } f \in \mathcal{C}^\infty(M), X \in \mathfrak{X}(M).$$

$$\sum_{k=0}^{\infty} \frac{x^k}{k!} = e^x$$

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$$\sum_{k=0}^{\infty} \frac{x^k}{k!} = e^x$$

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Class

```
% Bestand: inleveropgave.cls
\NeedsTeXFormat{LaTeX2e}
\ProvidesClass{inleveropgave}
[2021/10/26 inleveropgave v1.0]

\LoadClass[a4paper]{article}
\RequirePackage{amsmath,amssymb,amsthm}
\RequirePackage[margin=2.54cm]{geometry}
...
```

```
% Bestand: document.tex
\documentclass{inleveropgave}
\begin{document}
    Hey!
\end{document}
```

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Adjustbox

```
\usepackage{adjustbox,xcolor}
```

```
\adjustbox{
    cframe=blue!50!white 1pt 6pt 3pt,
    bgcolor=blue!10!white
}{%
    Hey!
}
```



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\footnote | witregel | \noindent | \vspace | parskip | twocolumn | \adjustbox

Adjustbox

```
\usepackage{adjustbox,xcolor}
```

```
    Lorem ipsum.
```

```
\adjustbox{  
cframe=blue!50!white 1pt 6pt 3pt,  
bgcolor=blue!10!white,  
}{%  
    Quisque porta feugiat tortor  
    tristique porta.  
}
```

Lorem ipsum.

Quisque porta feugiat tortor tr

Adjustbox

```
\usepackage{adjustbox,xcolor}
```

 Lorem ipsum.

```
\adjustbox{  
cframe=blue!50!white 1pt 6pt 3pt,  
bgcolor=blue!10!white,  
}{%  
 \parbox  
 {\dimexpr\linewidth - 20pt\relax}  
 {  
 Quisque porta feugiat tortor  
 tristique porta.  
 }%  
}
```

 Lorem ipsum.

Quisque porta feugiat
tortor tristique porta.

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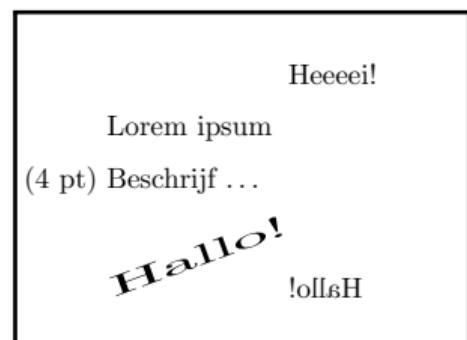
Adjustbox

```
\adjustbox{right=\ linewidth}{Heeee!}
```

```
 Lorem ipsum
```

```
\adjustbox{right=0pt}{(4 pt) }%  
Beschrijf \textellipsis
```

```
\adjustbox{scale={2.5}{1},rotate=20}{Hallo! }%  
\adjustbox{scale={-1}{1}}{Hallo! }
```



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parskip | **twocolumn** | **\adjustbox** | **\phantom**

Phantom

```
$ \displaystyle\sqrt{\phantom{\frac{2}{3}}} $  
$ \displaystyle\sqrt{\frac{2}{3}} $
```

$$\sqrt{\frac{2}{3}}$$

Adjustbox

```
\usepackage{adjustbox,xcolor}
```

```
 Lorem ipsum.
```

```
\adjustbox{  
cframe=blue!50!white 1pt 6pt 3pt,  
bgcolor=blue!10!white,  
}{%  
 \parbox  
 {\dimexpr\linewidth - 20pt\relax}  
 {  
 Quisque porta feugiat tortor  
 tristique porta.  
 }%  
}
```

Lorem ipsum.

Quisque porta feugiat
tortor tristique porta.

parskip | twocolumn | \adjustbox | \phantom

Adjustbox

```
\usepackage{environ}

\NewEnviron{important}{
    \par
    \adjustbox{
        cframe=blue!50!white 1pt 6pt 3pt,
        bgcolor=blue!10!white,
    }{%
        \parbox
        {\dimexpr\linewidth - 20pt\relax}
        {\BODY}%
    }
}
```

```
\begin{important}
    Lorem ipsum ...
\end{important}
```

parskip | twocolumn | \adjustbox | \phantom

Referenties en meermaalse compilatie

```
\begin{equation}\label{eq:wortel2}
    \sqrt{2}
\end{equation}
Kijk in \eqref{eq:wortel2}.
```

```
% document.aux gedeeltelijk:
\newlabel{eq:wortel2}{{1}{1}{BB}{equation.2.1}{}}
\newlabel{eq:wortel3}{{2}{1}{BB}{equation.2.2}{}}
\newlabel{eq:wortel4}{{3}{1}{BB}{equation.2.3}{}}
```

```
% document.toc
\contentsline {section}{\numberline {1}AA}{1}{section.1}%
\contentsline {section}{\numberline {2}BB}{1}{section.2}%
```

<https://tex.stackexchange.com/a/597678/242407>

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LaTeX editor shortcuts

In Overleaf

In VS Code

In TeXstudio

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`parskip` | `twocolumn` | `\adjustbox` | `\phantom`

Το τέλος

Vragen?

Loop je vast? Mail ons op
`texnicie@a-eskwadraat.nl`