

LaTeX eBook



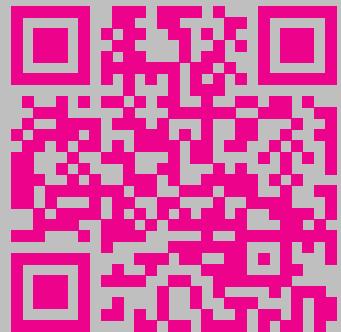
iN

Examples

Support the author



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1 Math Tips

1.1 Auto-resizing equation

$$\dot{\rho} = \frac{x^3}{45a^9 - 23b}$$

```
\documentclass{article}
\usepackage{amsmath}
\usepackage{graphicx}

\begin{document}
\begin{equation*}\label{eq1}
\text{\textbf{\\$\\$}}\dot{\rho}=\frac{x^3}{45a^9-23b}\\
\end{equation*}
\end{document}
```

1.2 Form for simplest calculation

Fill with number

if it doesn't work try another PDF viewer

a:

b:

C:

$\Sigma =$

1.2

```
\documentclass{article}
\usepackage{hyperref}

\begin{document}
\newcommand{\sss}[1]{this.getField("#1").value}
\begin{Form}
\noindent%
Fill with number\\

\TextField[name=a]{a:} \\
\TextField[name=b]{b:} \\
\TextField[name=c]{c:} \\
\noindent%
\$sum = \$ \TextField[name=AvgStat, calculate= {
    event.value = (
        \sss{a} +
        \sss{b} +
        \sss{c}) ;
}, readonly, value=0] {}
\end{Form}
\end{document}
```

1.3 Equation in the form of steps

$$\frac{n_0}{n_1} = q_1 + \frac{1}{q_2 + \frac{1}{q_3 + \frac{1}{q_4 + \dots + \frac{1}{q_{k-1} + \frac{1}{q_k}}}}}$$

```
\documentclass{article}
\usepackage{amsmath}
\def\mywd{35pt}

\begin{document}
\[
\frac{n_0}{n_1} = q_1 + \dfrac{\rightarrow \$1\$}{\makebox[\mywd][l]{q_2 + \dfrac{\rightarrow 1}{\makebox[\mywd][l]{q_3 + \dfrac{\rightarrow 1}{\makebox[\mywd][l]{q_4 + \dfrac{\rightarrow 1}{\raisebox{-6pt}{$\ddots$}}}}}}}}
\raisebox{-12pt}{+$\dfrac{\rightarrow kern30pt$}{\makebox[\mywd][l]{q_{k-1} + \dfrac{1}{q_k}}}$}}
\]
\end{document}
```

1.4 One number for multiline equation

$$\begin{aligned} x_{ij} &= d_{ijk} E_k, \\ x_{ij} &= \varsigma_{ijk} H_k, \\ x_{ij} &= s_{ijkl} X_{kl}, \\ x_{ij} &= \xi_{ij} \delta p, \\ x_{ij} &= \alpha_{ij} \delta T \end{aligned} \quad (1)$$

```
\documentclass{article}
\usepackage{amsmath}

\begin{document}
\begin{equation}
\begin{aligned}
x_{ij} &= d_{ijk} E_k, \\
x_{ij} &= \varsigma_{ijk} H_k, \\
x_{ij} &= s_{ijkl} X_{kl}, \\
x_{ij} &= \xi_{ij} \delta p, \\
x_{ij} &= \alpha_{ij} \delta T
\end{aligned}
\end{equation}
\end{document}
```

1.5 Matrix in standalone documentclass

$$\begin{matrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{matrix}$$

```
\documentclass[preview,border={-5cm 0cm -5cm -0.1cm}]{standalone}
\usepackage{amsmath}

\begin{document}
\begin{equation*}
\begin{matrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{matrix}
\end{equation*}
\end{document}
```

1.6 Multiple lines, one centered label

$$\begin{aligned} A &= \frac{\pi r^2}{2} \\ &= \frac{1}{2}\pi r^2 \end{aligned} \tag{2}$$

```
\begin{equation} \label{eq1}
\begin{aligned}
A &= \frac{\pi r^2}{2} \\
&= \frac{1}{2}\pi r^2
\end{aligned}
\end{equation}
```

1.7 Array as a fraction

$$\begin{aligned} I - IV - V^{6-4 \atop 4-3 \atop 6-4} - I - cadence \\ I - IV - V^{6-4 \atop 4-3} - I - cadence \\ \quad \quad \quad 6 - 4 \\ I - IV - V^{4-3} - I - cadence \end{aligned}$$

```
\documentclass{article}
\usepackage{amsmath}

\begin{document}
\$I-IV-V^{\substack{6-4 \\ 4-3 \\ 6-4}}-I-cadence\$ \\ \rightarrow \\ \$I-IV-V^{\genfrac{}{}{0pt}{}{}{6-4}{4-3}}-I-cadence\$ \\ \rightarrow \\ \$I-IV-V^{\begin{array}{c}6-4 \\ 4-3\end{array}}-I-\\ \rightarrow cadence\$ \\ \end{document}
```

1.8 Aligning equations inbetween text

qqq

```
\documentclass{article}
\usepackage{amsmath}

\begin{document}
\begin{alignat*}{2}
& \intertext{Photochemical:} \\
K_{UV} & \&: M[1] \& \& \text{\ch{->} M^*}[1] \\
& \intertext{Catalyzed:} \\
K_I & \&: I \& \& \text{\ch{->} 2R} \\
K_S & \&: R + M [1] \& \& \text{\ch{->} RM^*}[1]
\end{alignat*}
\end{document}
```

1.9 Equation: boxed split inside align

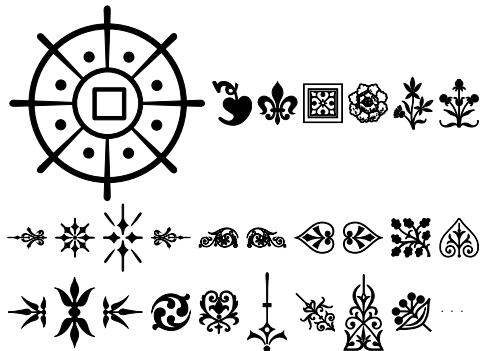
$$A = B + C + D$$

$$A = \boxed{B_is_long \\ + C_is_long_too \\ + D_is_long_too}$$
(1)

```
\begin{document}
\begin{align}
\begin{split}
A ={}& B + C + D \\
\mathrlap{\boxed{\phantom{\begin{gathered}}}}& \\
& \hookrightarrow A = {}+ C\_is\_long\_too\\
& \hookrightarrow end{gathered}}}} \\
\hspace{\dimexpr\fboxsep+\fboxrule-0.4pt} \\
\begin{split}
A ={}& \phantom{{}+} B\_is\_long \\
& + C\_is\_long\_too \\
& + D\_is\_long\_too
\end{split}
\end{split}
\end{align}
\end{document}
```

2 Text, Symbols

2.1 Ornaments from \pgfornament



```
\documentclass[varwidth]{standalone}
\usepackage[object=vectorian]{pgfornament}
\usepackage{tikz}

\begin{document}
\pgfornament[width=5cm]{4} \pgfornament[width=1cm]{5}
\pgfornament[width=1cm]{6} \pgfornament[width=1cm]{7}
\pgfornament[width=1cm]{8} \pgfornament[width=1cm]{9}
\pgfornament[width=1cm]{10} \pgfornament[width=1cm]{11}
\pgfornament[width=1cm]{12} \pgfornament[width=1cm]{13}
\pgfornament[width=1cm]{14} \pgfornament[width=1cm]{15}
\pgfornament[width=1cm]{16} \pgfornament[width=1cm]{17}
\pgfornament[width=1cm]{18} \pgfornament[width=1cm]{19}
\end{document}
```

2.2 Wireframe rendering

boxed boxed
boxed

```
\documentclass{article}
\usepackage{xcolor}
\usepackage{roboto}
\usepackage[outline]{contour}

\begin{document}
\roboto\huge\contourlength{.15em}
\contour{gray}{boxed}
\end{document}
```

2.3 Justified text

1. First item in a list
2. Second item in a list
3. Third item in a list
4. Fourth item in a list
5. Fifth item in a list
6. Sixth item in a list
7. Seventh item in a list
8. Eighth item in a list
9. Ninth item in a list
10. Tenth item in a list

```
\documentclass{article}
\usepackage{blindtext}
\newcommand*\justify{%
  \fontdimen2\font=0.4em% interword space
  \fontdimen3\font=0.2em% interword stretch
  \fontdimen4\font=0.1em% interword shrink
  \fontdimen7\font=0.1em% extra space
  \hyphenchar\font=`\-% allowing hyphenation
}
\begin{document}
\texttt{\justify\blindenumerate[10]}
\end{document}
```

2.4 Text under an underline

text Some long Text text
text under line

```
\documentclass{standalone}
\usepackage{array}
%\setlength\extrarowheight{2pt}
\newcommand{\mycommand}[2]{\begin{tabular}[t]{@{}c@{}}
#1\\ \hline
#2
\end{tabular}}
\begin{document}
text \mycommand{Some long Text}{text under line} text
\end{document}
```

2.5 Various types of underlining

\underline{important}	underlined text like <u>important</u>
\uunderline{urgent}	double-underlined text like <u><u>urgent</u></u>
\uwave{boat}	wavy underline like <u><u>boat</u></u>
\sout{wrong}	line struck through word like <u><u>wrong</u></u>
\xout{removed}	marked over like removed
\dashuline{dashing}	dashed underline like <u><u>dashing</u></u>
\dotuline{dotty}	dotted underline like <u><u>dotty</u></u>

```
\documentclass[14pt]{extreport}
\usepackage{ulem}

\begin{document}
\underline{important} \uunderline{urgent}
\uwave{boat} \sout{wrong}
\xout{removed} \dashuline{dashing}
\dotuline{dotty}
\end{document}
```

2.6 Bullets Style

32	33	34	35	36	37	38	39
40 →	41 ◻	42 ◉	43 ◊	44 ◇	45 ◆	46 ◈	47 ◉
48 ◎	49 ◊	50 ◊	51 ✓	52 ✓	53 ✕	54 ✕	55 ✕
56 ✕	57 +	58 +	59 +	60 +	61 †	62 ♀	63 †
64 ✖	65 ◊	66 +	67 +	68 +	69 +	70 +	71 ◊
72 ★	73 □	74 ◊	75 ★	76 *	77 ★	78 *	79 *
80 ✗	81 *	82 *	83 *	84 *	85 *	86 *	87 *
88 *	89 *	90 *	91 *	92 *	93 *	94 *	95 *
96 ✖	97 ✖	98 ◊	99 *	100 *	101 *	102 *	103 *
104 ✖	105 ✖	106 *	107 *	108 ●	109 ○	110 ■	111 □
112 □	113 □	114 □	115 ▲	116 ▽	117 ◆	118 ✦	119 ▶
120 I	121 I	122 I	123 *	124 *	125 ✦	126 ✦	
161 ♀	162 ♀	163 ♀	164 ♀	165 ♀	166 ♀	167 ♀	
168 ♀	169 ♀	170 ♀	171 ♀	172 ④	173 ④	174 ④	175 ④
176 ④	177 ④	178 ④	179 ④	180 ④	181 ④	182 ④	183 ④
184 ④	185 ④	186 ④	187 ④	188 ④	189 ④	190 ④	191 ④
192 ①	193 ②	194 ③	195 ④	196 ⑤	197 ⑥	198 ⑦	199 ⑧
200 ⑨	201 ⑩	202 ⑪	203 ⑫	204 ⑬	205 ⑭	206 ⑮	207 ⑯
208 ⑰	209 ⑱	210 ⑲	211 ⑳	212 ㉑	213 ㉒	214 ㉓	215 ㉔
216 ↘	217 →	218 ↘	219 →	220 →	221 →	222 →	223 →
224 ➔	225 ➔	226 ➔	227 ➔	228 ➔	229 ➔	230 ➔	231 ➔
232 ➔	233 ➔	234 ➔	235 ➔	236 ➔	237 ➔	238 ➔	239 ➔
241 ➔	242 ➔	243 ➔	244 ➔	245 ➔	246 ➔	247 ➔	
248 ➔	249 ➔	250 ➔	251 ➔	252 ➔	253 ➔	254 ➔	

```
\documentclass{article}
\usepackage{pifont}

\begin{document}
\begin{itemize}
\item[\ding{51}] Code 51
\item[\ding{56}] Code 56
\item[\ding{43}] Code 43
\item[\ding{118}] Code 118
\item[\ding{170}] Code 170
\end{itemize}
\end{document}
```

2.7 Change the title of \tableofcontents

Whatever

1 Section	
1.1 Subsection	1
1 Section	
1.1 Subsection	

```
\documentclass{article}
\renewcommand{\contentsname}{Whatever}

\begin{document}
\tableofcontents
\subsection{\hll{Section}}
\subsection{\hll{Subsection}}
\end{document}
```