OBS: Alla symboler som visas här måste skrivas i "math mode", vilket till exempel kan åstadkommas genom att omgärda dem med dollartecken ($).

Exempel: Skriv `$\alpha\cdot\beta$` för att få $\alpha \cdot \beta$.

Några få av symbolerna på denna och nästa sida kräver att man har `\usepackage{latexsym}` i början av filen

α	\alpha	Ξ	\Xi	$\oplus$	\oplus
β	\beta	Π	\Pi	$\ominus$	\ominus
γ	\gamma	Σ	\Sigma	$\otimes$	\otimes
δ	\delta	Υ	\Upsilon	$\oslash$	\oslash
ϵ	\epsilon	Φ	\Phi	$\odot$	\odot
ε	\varepsilon	Ψ	\Psi	$\bigcirc$	\bigcirc
ζ	\zeta	Ω	\Omega	$\dagger$	\dagger
η	\eta			$\ddagger$	\ddagger
θ	\theta	$\pm$	\pm	$\amalg$	\amalg
ϑ	\vartheta	$\mp$	\mp		
ι	\iota	$\times$	\times	$\leq$	\le, \leq
κ	\kappa	$\div$	\div	$\prec$	\prec
λ	\lambda	$\star$	\star	$\preceq$	\preceq
μ	\mu	$\circ$	\circ	$\ll$	\ll
ν	\nu	$\bullet$	\bullet	$\subset$	\subset
ξ	\xi	$\cdot$	\cdot	$\subseteq$	\subseteq
π	\pi	$\cap$	\cap	$\in$	\in
ϖ	\varpi	$\cup$	\cup	$\vdash$	\vdash
ρ	\rho	$\uplus$	\uplus	$\geq$	\ge,\geq
ϱ	\varrho	$\sqcap$	\sqcap	$\succ$	\succ
σ	\sigma	$\sqcup$	\sccup	$\succeq$	\succeq
ς	\varsigma	$\vee$	\vee	$\gg$	\gg
τ	\tau	$\wedge$	\wedge	$\supset$	\supset
υ	\upsilon	$\setminus$	\setminus	$\supseteq$	\supseteq
ϕ	\phi	$\wr$	\wr	$\sqsupset$	\sqsupset
φ	\varphi	$\diamond$	\diamond	$\sqsupseteq$	\sqsupseteq
χ	\chi	$\triangle$	\bigtriangleup	$\ni$	\ni
ψ	\psi	$\triangledown$	\bigtriangledown	$\dashv$	\dashv
ω	\omega	$\triangleleft$	\triangleleft	$\equiv$	\equiv
		$\triangleright$	\triangleright	$\sim$	\sim
Γ	\Gamma	$\lhd$	\lhd	$\simeq$	\simeq
Δ	\Delta	$\rhd$	\rhd	$\asymp$	\asymp
Θ	\Theta	$\unlhd$	\unlhd	$\approx$	\approx
Λ	\Lambda	$\unrhd$	\unrhd	$\cong$	\cong

$\neq$	\neq	$\searrow$	\searrow	$\Diamond$	\Diamond
$\doteq$	\doteq	$\swarrow$	\swarrow	$\triangle$	\triangle
$\propto$	\propto	$\nwarrow$	\nwarrow	$\clubsuit$	\clubsuit
$\models$	\models	$\aleph$	\aleph	$\diamondsuit$	\diamondsuit
$\perp$	\perp	$\hbar$	\hbar	$\heartsuit$	\heartsuit
$\mid$	|, \mid	$\imath$	\imath	$\spadesuit$	\spadesuit
$\parallel$	\\|, \parallel	$\jmath$	\jmath		
$\bowtie$	\bowtie	ℓ	\ell	$\sum$	\sum
$\Join$	\Join	$\wp$	\wp	$\prod$	\prod
$\smile$	\smile	$\Re$	\Re	$\coprod$	\coprod
$\frown$	\frown	$\Im$	\Im	$\int$	\int
		$\mho$	\mho	$\oint$	\oint
$\leftarrow$	\leftarrow	$\prime$	\prime	$\bigcap$	\bigcap
$\Leftarrow$	\Leftarrow	$\emptyset$	\emptyset	$\bigcup$	\bigcup
$\rightarrow$	\rightarrow	∇	\nabla	$\bigsqcup$	\bigsqcup
$\Rightarrow$	\Rightarrow	$\surd$	\surd	$\bigvee$	\bigvee
$\leftrightarrow$	\leftrightarrow	$\top$	\top	$\bigwedge$	\bigwedge
$\Leftrightarrow$	\Leftrightarrow	$\bot$	\bot	$\bigodot$	\bigodot
$\mapsto$	\mapsto	$\angle$	\angle	$\bigotimes$	\bigotimes
$\longmapsto$	\longmapsto	$\forall$	\forall	$\bigoplus$	\bigoplus
$\longleftarrow$	\longleftarrow	$\exists$	\exists	$\biguplus$	\biguplus
$\hookrightarrow$	\hookrightarrow	$\neg$	\neg		
$\leadsto$	\leadsto	$\flat$	\flat	$\{$	\{
$\uparrow$	\uparrow	$\natural$	\natural	$\}$	\}
$\downarrow$	\downarrow	$\sharp$	\sharp	$\lfloor$	\lfloor
$\Uparrow$	\Uparrow	$\backslash$	\backslash	$\rfloor$	\rfloor
$\Downarrow$	\Downarrow	∂	\partial	$\lceil$	\lceil
$\updownarrow$	\updownarrow	∞	\infty	$\rceil$	\rceil
$\Updownarrow$	\Updownarrow	$\Box$	\Box	$\langle$	\langle
$\nearrow$	\nearrow			$\rangle$	\rangle

$x^2 \neq -1$ `x^2\ne -1`

$\pi \in \mathbb{R} \setminus \mathbb{Q}$ `\pi\in{\mathbb R}\setminus{\mathbb Q}`

$\pi \notin \mathbb{Q}$ `\pi\not\in{\mathbb Q}`

Se fotnot

[1]För att få $\mathbb{Q}$, $\mathbb{R}$ etc. krävs att man har \usepackage{amssymb} i början av filen

$\sin x = \log(\pi + 2x)$ `\sin x=\log(\pi+2x)`

Fel: $sinx = log(\pi + 2x)$ `sin x=log(\pi+2x)`

$\sum_{i=1}^{n} i = \frac{n(n+1)}{2}$ `\sum_{i=1}^{n}{i}={n(n+1)\over 2}`

$$\sum_{i=1}^{n} i = \frac{n(n+1)}{2}$$ `\displaystyle\sum_{i=1}^{n}{i}={n(n+1)\over 2}`

$\lim_{x\to 0} \frac{\sin x}{x} = 1$ `\lim_{x\rightarrow 0}{\sin x\over x}=1`

$$\lim_{x\to 0} \frac{\sin x}{x} = 1$$ `\displaystyle\lim_{x\rightarrow 0}{\sin x\over x}=1`

$\lim_{x\to \infty} \frac{\ln x}{x} = 0$ `\lim_{x\rightarrow \infty} {\ln x\over x}=0`

$a = x \text{ och } b = y$ `a=x \mbox{ och } b=y`

$a = x \quad \text{och} \quad b = y$ `a=x \mbox{  ~~och~~ } b=y`

$\sqrt{-1} = i$ `\sqrt{-1} = i`

$$x = \frac{-p}{2} \pm \sqrt{\left(\frac{p}{2}\right)^2 - q}$$ `\displaystyle x={-p\over 2} \pm \sqrt{\left({p\over 2}\right)^2-q}`

$$\int_0^{\pi} x dx$$ `\displaystyle \int_0^\pi x dx`

snyggare: $$\int_0^{\pi} x\, dx$$ `\displaystyle \int_0^\pi x\, dx`

```
\pmatrix{
1 & 1 & 1 & 1 \cr
2 & -1 &0  &1  \cr
16 & 4 & 0 & -1 \cr
8 & -4 & 2 & -1}
```

$$\begin{pmatrix} 1 & 1 & 1 & 1 \\ 2 & -1 & 0 & 1 \\ 16 & 4 & 0 & -1 \\ 8 & -4 & 2 & -1 \end{pmatrix}$$

```
\left(
\begin{array}{cccc|r}
1 & 1 & 1 & 1 &   -10 \\
2 & -1 &0  &1  &  0 \cr
16 & 4 & 0 & -1 &  0 \cr
8 & -4 & 2 & -1 &  46
\end{array}
\right)
```

$$\left(\begin{array}{cccc|r} 1 & 1 & 1 & 1 & -10 \\ 2 & -1 & 0 & 1 & 0 \\ 16 & 4 & 0 & -1 & 0 \\ 8 & -4 & 2 & -1 & 46 \end{array}\right)$$

```
\begin{array}{rrrrrrrrr}
4a&-&2b&&&+&2d&=&0\\
16a&+&4b&&&-&d&=&0\\
a&+&b&+&c&+&d&=&-10\\
8a&-&4b&+&2c&-&d&=& 46\\
\end{array}
```

$$\begin{array}{rcrcrcrcr} 4a & - & 2b & & & + & 2d & = & 0 \\ 16a & + & 4b & & & - & d & = & 0 \\ a & + & b & + & c & + & d & = & -10 \\ 8a & - & 4b & + & 2c & - & d & = & 46 \end{array}$$

```
\begin{eqnarray*}
1 &=& 1\\
1+3 &=& 4\\
1+3+5 &=& 9\\
\end{eqnarray*}
```

$$\begin{aligned} 1 &= 1 \\ 1+3 &= 4 \\ 1+3+5 &= 9 \end{aligned}$$

```
\begin{array}{ccccccccccc}
&&&& 1\\
&&& 1 && 1\\
&& 1 && 2 && 1\\
& 1 && 3 && 3 && 1\\
1 && 4 && 6 && 4 && 1
\end{array}
```

$$\begin{array}{ccccccccccc} & & & & 1 & & & & & & \\ & & & 1 & & & 1 & & & & \\ & & 1 & & & 2 & & & 1 & & \\ & 1 & & & 3 & & & 3 & & & 1 \\ 1 & & & 4 & & & 6 & & & 4 & & & 1 \end{array}$$

Att definiera egna ”macros”

```
\newcommand\minmatris{
$\pmatrix{
a & b\cr
c & d\cr
}$}
```

`\minmatris` $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$

```
\newcommand\mat[4]{\pmatrix{
#1 & #2\cr
#3 & #4\cr
}}
```

`\mat abcd` $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$

`\mat {\sqrt x} {-1/\sin x} {1} {\sqrt x}` $\begin{pmatrix} \sqrt{x} & -1/\sin x \\ 1 & \sqrt{x} \end{pmatrix}$

Ett ibland enklare men farligare sätt

```
\def\mat#1,#2,#3,#4,{\pmatrix{
#1 & #2\cr
#3 & #4\cr
}}
```

`\mat a,b,c,d,` $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$

`\mat \sqrt x, -1/\sin x, 1, \sqrt x,` $\begin{pmatrix} \sqrt{x} & -1/\sin x \\ 1 & \sqrt{x} \end{pmatrix}$

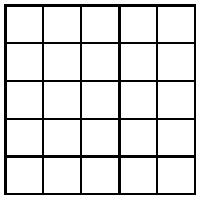
Att använda `\def` är farligt, för att man riskerar att definiera om något som TEX använder. Inga varningar utfärdas i sådana fall, men det gör det däremot om man försöker definiera om en ”macro” med kommandot `\newcommand`.

Att rita är ganska jobbigt i LaTeX (men snyggt blir det!). Det blir lättare om man har följande två rader i början av filen:

```
\usepackage{epic}
\usepackage{eepic}
```

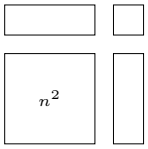
Då kan man t ex rita följande på ett enkelt sätt:

```
\setlength{\unitlength}{1mm}
\begin{picture}(100,25)
\put(35,0){\grid(25,25)(5,5)}
\end{picture}
```



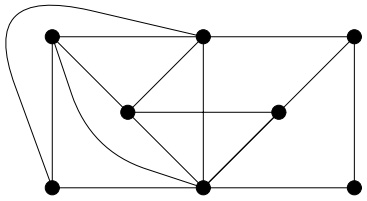
Fler exempel

```
\setlength{\unitlength}{.8mm}
\begin{picture}(30,0)
\put(153,3){
\path(0,0)(15,0)(15,15)(0,15)(0,0)
\path(0,18)(15,18)(15,23)(0,23)(0,18)
\path(18,0)(18,15)(23,15)(23,0)(18,0)
\path(18,18)(18,23)(23,23)(23,18)(18,18)
\put(7.5,7.5){\makebox(0,0){\tiny $n^2$}}
}
\end{picture}
```

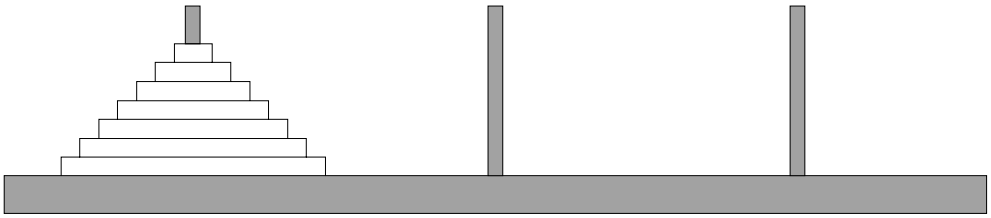



```
\setlength{\unitlength}{10mm}
\newcommand\p{\circle*{0.2}}
\begin{picture}(17,3)
\put(10,0){
\put(0,2){\p} \put(2,2){\p} \put(4,2){\p}
        \put( 1,1){\p}   \put(3,1){\p}
\put(0,0){\p} \put(2,0){\p} \put(4,0){\p}

\path(0,2)(0,0)(4,0)(4,2)(0,2)(2,0)(2,2)(1,1)(3,1)(2,0)(4,2)
\spline(0,0)(-1,2.7)(2,2)
\spline(2,0)(0.5,0.5)(0,2)
}
\end{picture}
```

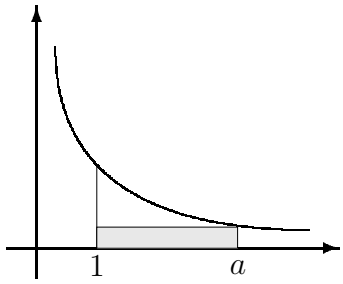


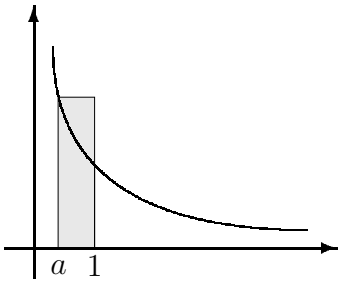
Med hjälp av paketen `epic` och `epic` kan man även skugga (det är inte säkert att detta syns på skärmen, utan du får kanske skriva ut sidan). Man kan modifiera `\texture` för att göra skuggan mörkare/ljusare.



```
\texture{
aaaaaaaa 0 0 0 aaaaaaaa 0 0 0
aaaaaaaa 0 0 0 aaaaaaaa 0 0 0
aaaaaaaa 0 0 0 aaaaaaaa 0 0 0
aaaaaaaa 0 0 0 aaaaaaaa 0 0 0
}

\setlength{\unitlength}{.5mm}
\begin{picture}(280,80)
  \put(20,10){
    \put(0,0){\shade\path(0,0)(260,0)(260,10)(0,10)(0,0)}
    \put(48,10){\shade\path(0,35)(0,45)(4,45)(4,35)(0,35)}
    \put(128,10){\shade\path(0,0)(0,45)(4,45)(4,0)(0,0)}
    \put(208,10){\shade\path(0,0)(0,45)(4,45)(4,0)(0,0)}
    %%  Nu kommer alla skivorna
    \put(15,10){\path(0,0)(0,5)(70,5)(70,0)}
    \put(20,15){\path(0,0)(0,5)(60,5)(60,0)}
    \put(25,20){\path(0,0)(0,5)(50,5)(50,0)}
    \put(30,25){\path(0,0)(0,5)(40,5)(40,0)}
    \put(35,30){\path(0,0)(0,5)(30,5)(30,0)}
    \put(40,35){\path(0,0)(0,5)(20,5)(20,0)}
    \put(45,40){\path(0,0)(0,5)(10,5)(10,0)}
    }
\end{picture}
```






```
\texture{
a00000a0 0 0 0 a00000a0 0 0 0
a00000a0 0 0 0 a00000a0 0 0 0
a00000a0 0 0 0 a00000a0 0 0 0
a00000a0 0 0 0 a00000a0 0 0 0
}

\setlength{\unitlength}{.8mm}%
\begin{picture}(50,40)
  \put(20,0){
    \put(100,0){\shade{\path(10,0)(10,25)(4,25)(4,0)(10,0)}}

    \multiput(0,0)(100,0){2}{
      \thicklines
      \put(0,-5){\vector(0,1){45}}
      \put(-5,0){\vector(1,0){55}}

      \thinlines

      \qbezier(3,33.3)(3,3)(45,3)    %%%%% Detta är kurvan <<<<<<<<<<<

      \path(10,0)(10,13.5)

      \put(10,-3){\makebox(0,0){1}}
      }
    }

  \put(20,0){
    \put(33.3,-2.7){\makebox(0,-1){$a$}}
    \shade{\path(10,0)(10,3.5)(33.3,3.5)(33.3,0)(10,0)}
    }

  \put(120,0){
    \put(4,-2.7){\makebox(0,-1){$a$}}
```

```
    }
\end{picture}
```

Följande kommandon, som alla måste föregås av \, kräver att man har `\usepackage{amssymb}` i början av filen

⊡	boxdot	⇄	rightleftarrows	≒	fallingdotseq
⊞	boxplus	↰	Lsh	≽	succcurlyeq
⊠	boxtimes	↱	Rsh	≧	geqq
□	square	⇝	rightsquigarrow	⩾	geqslant
■	blacksquare	⇜⇝	leftrightsquigarrow	≷	gtrless
▪	centerdot	↫	looparrowleft	⊏	sqsubset
◊	lozenge	↬	looparrowright	⊐	sqsupset
⧫	blacklozenge	≗	circeq	▷	vartriangleright
↻	circlearrowright	≻	succsim	◁	vartriangleleft
↺	circlearrowleft	≳	gtrsim	⊵	trianglerighteq
⇌	rightleftharpoons	≳	gtrapprox	⊴	trianglelefteq
⇋	leftrightharpoons	⟜	multimap	★	bigstar
⊟	boxminus	∴	therefore	≬	between
⊩	Vdash	∵	because	▼	blacktriangledown
⊪	Vvdash	≒	doteqdot	▶	blacktriangleright
⊨	vDash	≜	triangleq	◀	blacktriangleleft
↠	twoheadrightarrow	≾	precsim	△	vartriangle
↞	twoheadleftarrow	≲	lesssim	▲	blacktriangle
⇇	leftleftarrows	≲	lessapprox	▽	triangledown
⇉	rightrightarrows	⪕	eqslantless	≗	eqcirc
⇈	upuparrows	⪖	eqslantgtr	⋚	lesseqgtr
⇊	downdownarrows	≺	curlyeqprec	⋛	gtreqless
↾	upharpoonright	≻	curlyeqsucc	⋚	lesseqqgtr
⇂	downharpoonright	≼	preccurlyeq	⋛	gtreqqless
↿	upharpoonleft	≦	leqq	⇛	Rrightarrow
⇃	downharpoonleft	⩽	leqslant	⇚	Lleftarrow
⇀	rightarrowtail	≶	lessgtr	⩒	veebar
↼	leftarrowtail	‵	backprime	⩑	barwedge
⇆	leftrightarrows	≓	risingdotseq	⩕	doublebarwedge

$\angle$	angle
$\measuredangle$	measuredangle
$\sphericalangle$	sphericalangle
$\varpropto$	varpropto
$\smallsmile$	smallsmile
$\smallfrown$	smallfrown
$\Subset$	Subset
$\Supset$	Supset
$\Cup$	Cup
$\Cap$	Cap
$\curlywedge$	curlywedge
$\curlyvee$	curlyvee
$\leftthreetimes$	leftthreetimes
$\rightthreetimes$	rightthreetimes
$\subseteqq$	subseteqq
$\supseteqq$	supseteqq
$\bumpeq$	bumpeq
$\Bumpeq$	Bumpeq
$\lll$	lll
$\ggg$	ggg
$\circledS$	circledS
$\pitchfork$	pitchfork
$\dotplus$	dotplus
$\backsim$	backsim
$\backsimeq$	backsimeq
$\complement$	complement
$\intercal$	intercal
$\circledcirc$	circledcirc
$\circledast$	circledast
$\circleddash$	circleddash
$\lvertneqq$	lvertneqq
$\gvertneqq$	gvertneqq
$\nleq$	nleq
$\ngeq$	ngeq
$\nless$	nless
$\ngtr$	ngtr
$\nprec$	nprec
$\nsucc$	nsucc
$\lneqq$	lneqq
$\gneqq$	gneqq
$\nleqslant$	nleqslant
$\ngeqslant$	ngeqslant
$\lneq$	lneq
$\gneq$	gneq
$\npreceq$	npreceq
$\nsucceq$	nsucceq
$\precnsim$	precnsim
$\succnsim$	succnsim
$\lnsim$	lnsim
$\gnsim$	gnsim
$\nleqq$	nleqq
$\ngeqq$	ngeqq
$\precneqq$	precneqq
$\succneqq$	succneqq
$\precnapprox$	precnapprox
$\succnapprox$	succnapprox
$\lnapprox$	lnapprox
$\gnapprox$	gnapprox
$\nsim$	nsim
$\ncong$	ncong
$\diagup$	diagup
$\diagdown$	diagdown
$\varsubsetneq$	varsubsetneq
$\varsupsetneq$	varsupsetneq
$\nsubseteqq$	nsubseteqq
$\nsupseteqq$	nsupseteqq
$\subsetneqq$	subsetneqq
$\supsetneqq$	supsetneqq
$\varsubsetneqq$	varsubsetneqq
$\varsupsetneqq$	varsupsetneqq
$\subsetneq$	subsetneq
$\supsetneq$	supsetneq
$\nsubseteq$	nsubseteq
$\nsupseteq$	nsupseteq
$\nparallel$	nparallel
$\nmid$	nmid
$\nshortmid$	nshortmid
$\nshortparallel$	nshortparallel
$\nvdash$	nvdash
$\nVdash$	nVdash
$\nvDash$	nvDash
$\nVDash$	nVDash
$\ntrianglerighteq$	ntrianglerighteq
$\ntrianglelefteq$	ntrianglelefteq
$\ntriangleleft$	ntriangleleft
$\ntriangleright$	ntriangleright
$\nleftarrow$	nleftarrow
$\nrightarrow$	nrightarrow
$\nLeftarrow$	nLeftarrow
$\nRightarrow$	nRightarrow
$\nLeftrightarrow$	nLeftrightarrow
$\nleftrightarrow$	nleftrightarrow
$\divideontimes$	divideontimes
$\varnothing$	varnothing
$\nexists$	nexists
$\Finv$	Finv
$\Game$	Game
$\mho$	mho
$\eth$	eth
$\eqsim$	eqsim
$\beth$	beth
$\gimel$	gimel
$\daleth$	daleth
$\lessdot$	lessdot
$\gtrdot$	gtrdot

$\ltimes$	ltimes	$\approxeq$	approxeq	$\Bbbk$	Bbbk
$\rtimes$	rtimes	$\succapprox$	succapprox	$\hbar$	hslash
$\shortmid$	shortmid	$\precapprox$	precapprox	$\hbar$	hbar
$\shortparallel$	shortparallel	$\curvearrowleft$	curvearrowleft	$\ni$	backepsilon
$\smallsetminus$	smallsetminus	$\curvearrowright$	curvearrowright		
$\thicksim$	thicksim	$\digamma$	digamma		
$\thickapprox$	thickapprox	$\varkappa$	varkappa		