Connectors

$$X \longrightarrow Y$$

$$f$$

$$Z$$

Arc connectors

from $\xrightarrow{\quad 20\text{deg}\quad}$ to

$\xrightarrow{\quad 0\text{deg}\quad}$

-50deg

Matching math arrows

Compare to $\rightarrow, \Rightarrow \Rrightarrow \twoheadrightarrow, \hookrightarrow, \mapsto$.

Compare our output to the reference symbol in default math font.
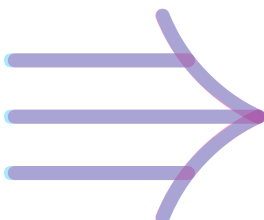
Double and triple lines

Diagram $A \xrightarrow{f} B$ and equation $A \to B$.

Diagram $A \xRightarrow{f} B$ and equation $A \Rightarrow B$.

Diagram $A \xRightarrow{f} B$ and equation $A \Rightarrow B$.

Arrow head shorthands

`"->"`	$=$	⟶
`"<-"`	$=$	⟵
`">-<"`	$=$	⟩———⟨
`"<->"`	$=$	⟷
`"<=>"`	$=$	⟺
`"<==>"`	$=$	⟸⟹
`"|->"`	$=$	↦
`"|=>"`	$=$	⤇
`">->"`	$=$	⟩——⟶
`"<<->>"`	$=$	⟪——⟫
`">>-<<"`	$=$	⟫——⟪
`">>>-}>"`	$=$	⋙——⟶
`"hook->"`	$=$	↪
`"hook'--hook"`	$=$	⊂----⊃
`"|=|"`	$=$	⊨——⊨
`"||-||"`	$=$	⊩——⊩
`"|||-|||"`	$=$	⫢——⫢
`"/--\\"`	$=$	↗-----↘
`"\\=\\"`	$=$	⟸——
`"/=/"`	$=$	⟹——
`"x-X"`	$=$	×——✕
`">>-<<"`	$=$	⟫——⟪
`"harpoon-harpoon'"`	$=$	⥮——⥮
`"harpoon'-<<"`	$=$	↽——⟪
`"<--hook'"`	$=$	↩-----⊃
`"|..|"`	$=$	⊦·········⊦
`"hooks--hooks"`	$=$	⊂----⊃
`"o-O"`	$=$	∘——○
`"O-o"`	$=$	○——∘
`"*-@"`	$=$	•——●
`"o==O"`	$=$	∘⟹○
`"||->>"`	$=$	⊩——⟫
`"<|-|>"`	$=$	◄——►
`"|>-<|"`	$=$	►——◄
`"-|-"`	$=$	——+——
`"hook-/->"`	$=$	↪／⟶
`"<{-}>"`	$=$	◄——►

Bending arrows

Fine mark angle corrections

Defocus adjustment

Automatic label placement

Default placement above the line.
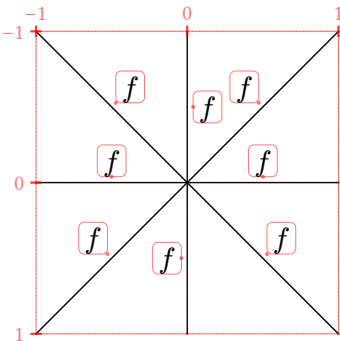
Reversed y-axis:
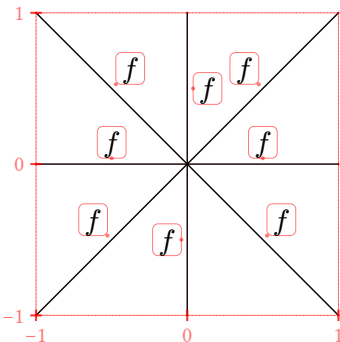
Crossing connectors
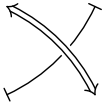
edge() argument shorthands
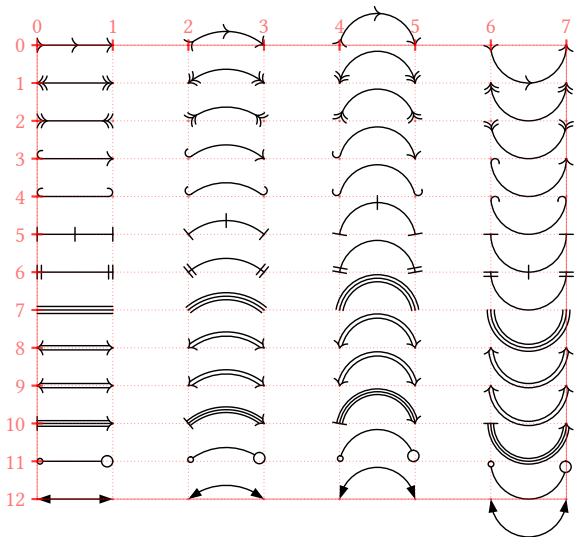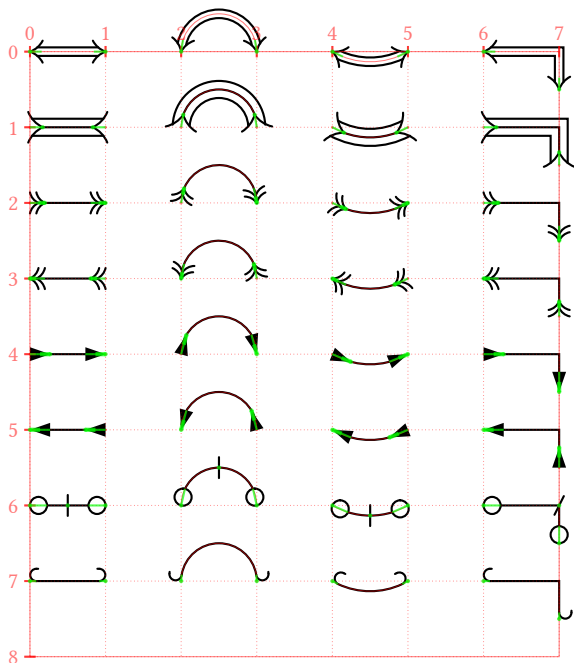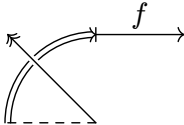
Diagram-level options

CeTZ integration

Bézier

A
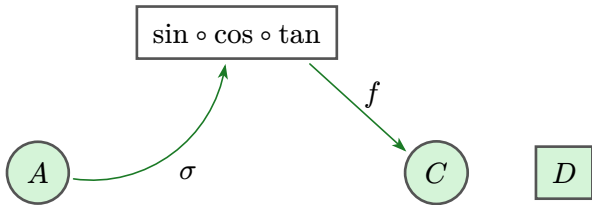
Node bounds, inset, and outset

0   1

0 | hello | ⟺ | there |

Corner edges

(−1, −1) *f* (1, −1)

f left *f*

(−1, 1) *f* (1, 1)

f (−1, −1) (1, −1)

f right *f*

(−1, 1) *f* (1, 1)

(−1, 1) *f* (1, 1)

f left *f*

(−1, −1) *f* (1, −1)

f (−1, 1) (1, 1)

f right *f*

(−1, −1) *f* (1, −1)
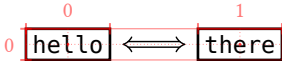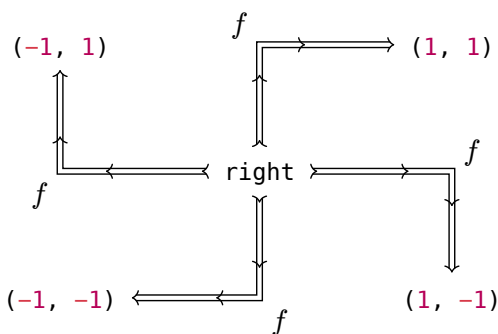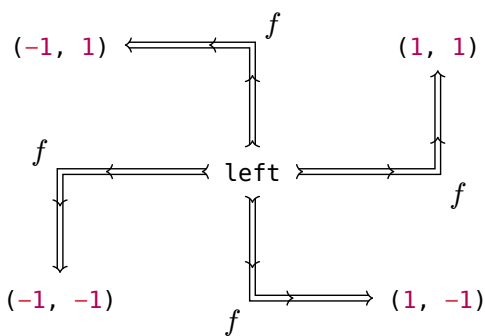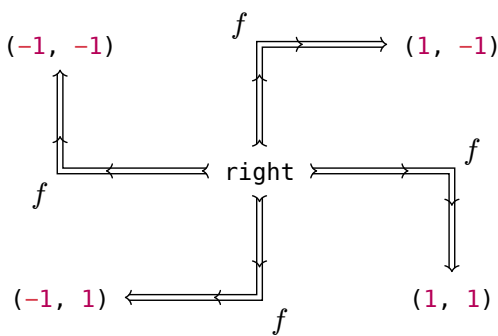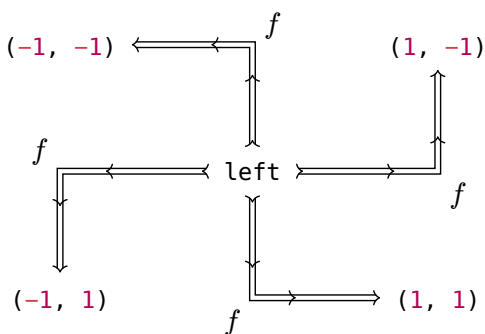
Double node strokes
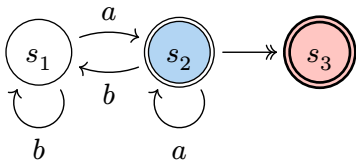
Relative and absolute extrusion lengths

Custom node sizes

Make sure provided dimensions are exact, not affected by node `inset`.

1cm

width   height   both

1cm

Example

Make sure node or edge labels don't pick up equation numbers!

$$a^2 \tag{1}$$

$$b^2 \tag{2}$$

Axes configuration

1 $(1,1)$

(ltr, btt)

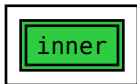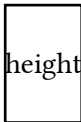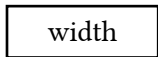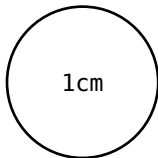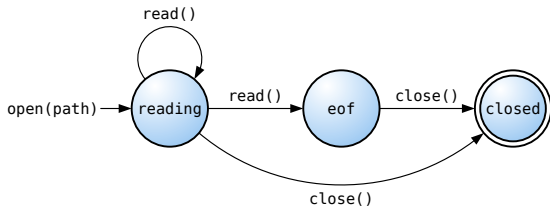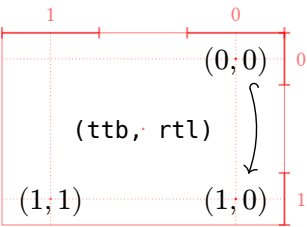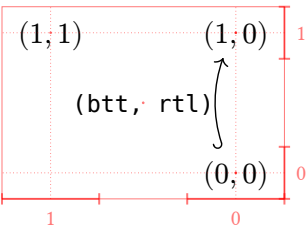0 $(0,0)$ $(1,0)$

     0 1

1 $(1,0)$ $(1,1)$

(btt, ltr)

0 $(0,0)$

     0 1

     0 1

0 $(0,0)$ $(1,0)$

(ltr, ttb)

1 $(1,1)$

     0 1

0 $(0,0)$

(ttb, ltr)

1 $(1,0)$ $(1,1)$

$(1,1)$ 1

(rtl, btt)

$(1,0)$ $(0,0)$ 0

   1 0

$(1,1)$ $(1,0)$ 1

(btt, rtl)

$(0,0)$ 0

   1 0

   1 0

$(1,0)$ $(0,0)$ 0

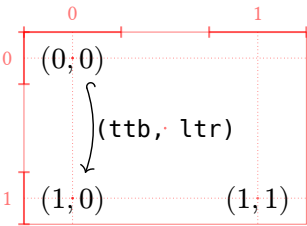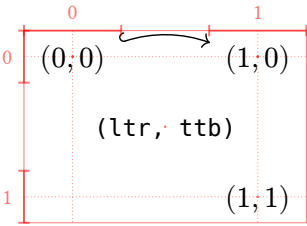(rtl, ttb)

$(1,1)$ 1

   1 0

$(0,0)$ 0

(ttb, rtl)

$(1,1)$ $(1,0)$ 1
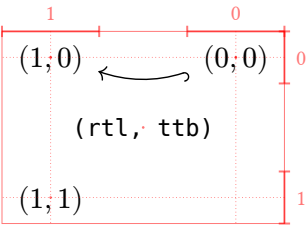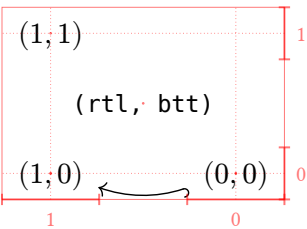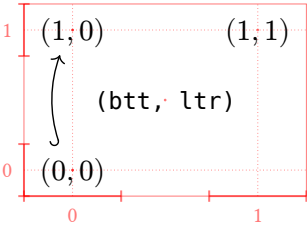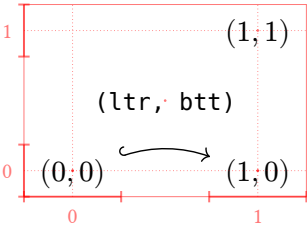
Implicit **from** and **to** points

$$\xrightarrow{\text{label}} \xrightarrow{\text{label}} \xrightarrow{\text{label}}$$

next

prev
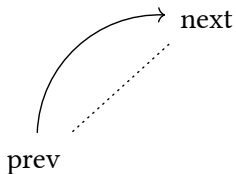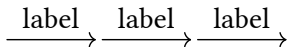
Edge positional arguments

Explicit named arguments versus implicit positional arguments.

Each row should be the same thing repeated.

$$A \longrightarrow B \qquad A \longrightarrow B \qquad A \longrightarrow B$$

$$A \xrightarrow{\pi} B \qquad A \xrightarrow{\pi} B \qquad A \xrightarrow{\pi} B$$

$$A \xmapsto{\tau} B \qquad A \xmapsto{\tau} B \qquad A \xmapsto{\tau} B$$

$$A \xtwoheadrightarrow{+} B \qquad A \xtwoheadrightarrow{+} B \qquad A \xtwoheadrightarrow{+} B$$

Symbol arrow aliases

Math	Unicode	Mark	Diagram
$\rightarrow$	$\rightarrow$	`->`	⟶
$\longrightarrow$	☐?	`->`	⟶
$\leftarrow$	$\leftarrow$	`<-`	⟵
$\leftrightarrow$	$\leftrightarrow$	`<->`	⟷
$\longleftrightarrow$	☐?	`<->`	⟷
$\twoheadrightarrow$	☐?	`->>`	↠
$\twoheadleftarrow$	☐?	`<<-`	↞
$\rightarrowtail$	☐?	`>->`	↣
$\leftarrowtail$	☐?	`<-<`	↢
$\Rightarrow$	$\Rightarrow$	`=>`	⟹
$\Longrightarrow$	☐?	`=>`	⟹
$\Leftarrow$	☐?	`<=`	⟸
$\Leftrightarrow$	$\Leftrightarrow$	`<=>`	⟺
$\Longleftrightarrow$	☐?	`<=>`	⟺
$\mapsto$	$\mapsto$	`|->`	⟼
$\Mapsto$	☐?	`|=>`	⟾
$\rightsquigarrow$	☐?	none!	none!
$\leftsquigarrow$	☐?	none!	none!
$\hookrightarrow$		`hook->`	↪
$\hookleftarrow$		`<-hook'`	↩

Math-mode diagrams

The following diagrams should be identical:

$$
\begin{array}{ccc}
G & \xrightarrow{\quad f \quad} & \mathrm{im}(f) \\
\Big\downarrow{\scriptstyle \pi} & \nearrow{\scriptstyle \tilde{f}} & \\
G/\ker(f) & &
\end{array}
$$

$$
\begin{array}{ccc}
G & \xrightarrow{\quad f \quad} & \mathrm{im}(f) \\
\Big\downarrow{\scriptstyle \pi} & \nearrow{\scriptstyle \tilde{f}} & \\
G/\ker(f) & &
\end{array}
$$

Relative node coordinates

$$\begin{array}{ccc}
G & \xrightarrow{\ f\ } & \operatorname{im}(f) \\
\pi \downarrow & \tilde{f} \nearrow & \\
G/\ker(f) & &
\end{array}$$