Contents

Arc edges

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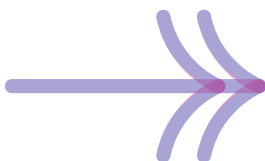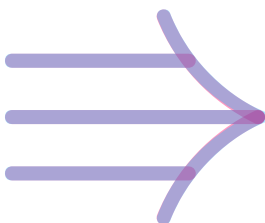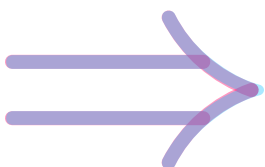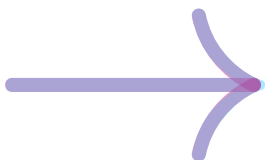
Compare to $\rightarrow, \Rightarrow, \Rrightarrow, \twoheadrightarrow, \hookrightarrow, \mapsto$.

Our output versus reference symbol in default math font.

Double and triple lines

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

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

Diagram $A \overset{f}{\Longrightarrow} B$ and equation $A \Rrightarrow B$.

Arrow head shorthands

Shorthand		Rendering
`"->"`	$=$	⟶
`"<-"`	$=$	⟵
`">-<"`	$=$	⟩⟨
`"<->"`	$=$	⟷
`"<=>"`	$=$	⟺
`"<==>"`	$=$	⟸⟹
`"|->"`	$=$	⊢→
`"|=>"`	$=$	⊨⟹
`">->"`	$=$	⟩⟶
`"<<->>"`	$=$	⟪⟶⟫
`">>-<<"`	$=$	⟫⟨⟨
`">>>-}>"`	$=$	⟫⟫→
`"hook->"`	$=$	↪
`"hook'--hook"`	$=$	⸦- - - -⸧
`"|=|"`	$=$	⊨⊨
`"||-||"`	$=$	⊩⊩
`"|||-|||"`	$=$	⫴⫴
`"/--\\"`	$=$	⟋- - - -⟍
`"\\=\\"`	$=$	⟍⟍
`"/=/"`	$=$	⟋⟋
`"x-X"`	$=$	×⟶✕
`">>-<<"`	$=$	⟫⟨⟨
`"harpoon-harpoon'"`	$=$	↽⇁
`"harpoon'-<<"`	$=$	⇁⟨⟨
`"<--hook'"`	$=$	⟵- - - -⸧
`"|..|"`	$=$	⊢⋯⋯⊣
`"hooks--hooks"`	$=$	⸦- - - -⸧
`"o-0"`	$=$	∘⟶○
`"0-o"`	$=$	○⟶∘
`"*-@"`	$=$	•⟶●
`"o==0"`	$=$	∘⟹○
`"||->>"`	$=$	⊩⟶⟫
`"<|-|>"`	$=$	◀⟶▶
`"|>-<|"`	$=$	▶⟵◀
`"-|-"`	$=$	⟶⊣⟵
`"hook-/->"`	$=$	↪⟋⟶
`"<{-}>"`	$=$	◀⟷▶

Symbol arrow aliases

Math	Unicode	Mark	Diagram
$\rightarrow$	$\rightarrow$	->	⟶
$\longrightarrow$	?	->	⟶
$\leftarrow$	$\leftarrow$	<-	⟵
$\leftrightarrow$	$\leftrightarrow$	<->	⟷
$\longleftrightarrow$	?	<->	⟷
$\twoheadrightarrow$	?	->>	⟶⟩
$\twoheadleftarrow$	?	<<-	⟨⟵
$\rightarrowtail$	?	>->	⟩⟶
$\leftarrowtail$	?	<-<	⟵⟨
$\Rightarrow$	$\Rightarrow$	=>	⟹
$\Longrightarrow$	?	=>	⟹
$\Longleftarrow$	?	<=	⟸
$\Leftrightarrow$	$\Leftrightarrow$	<=>	⟺
$\Longleftrightarrow$	?	<=>	⟺
$\mapsto$	$\mapsto$	|->	⟼
$\Mapsto$	?	|=>	⟾
$\rightsquigarrow$	?	~>	⟿
$\leftsquigarrow$	?	<~	⬳
$\hookrightarrow$		hook->	↪
$\hookleftarrow$		<-hook'	↩

Bending arrows
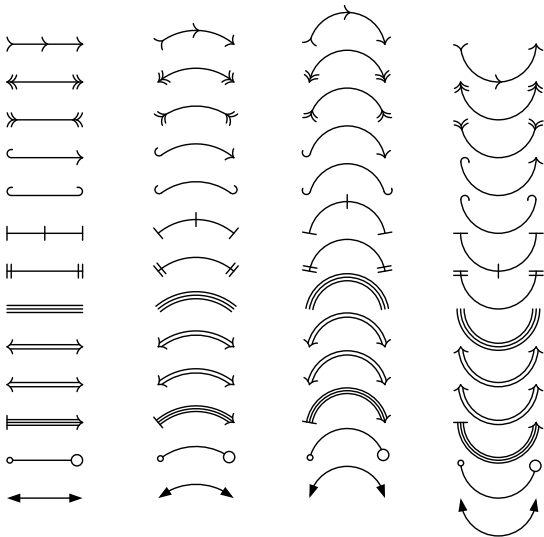
Fine mark angle corrections
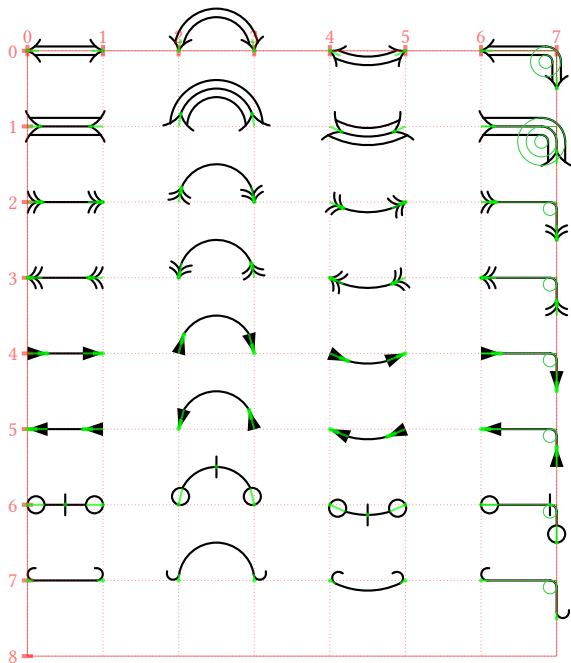
Defocus adjustment
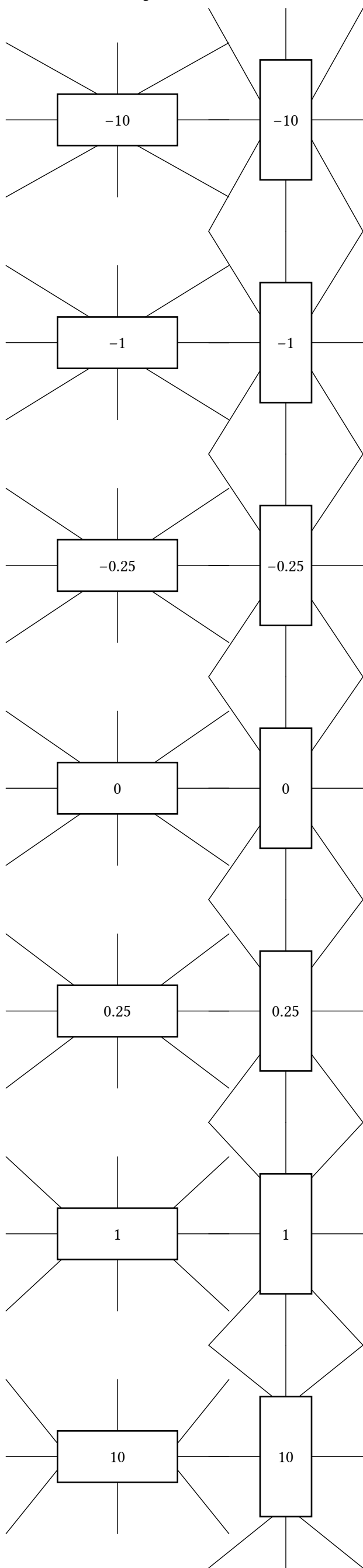
Label side

left

center
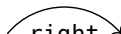
right

left

center

right

left

center

right

left

left

left

center

center

center

right

right

right

Automatic label placement

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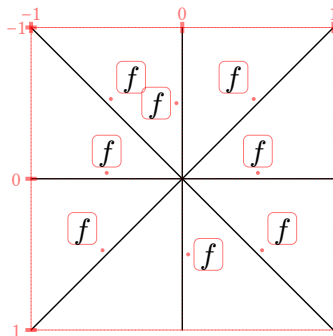
Reversed y-axis:
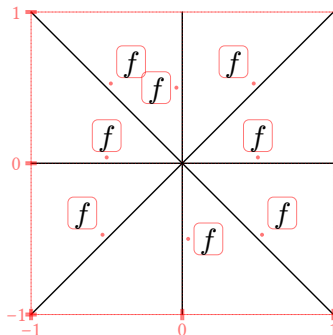
Crossing connectors
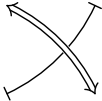
edge() argument shorthands

`edge()` stroke

$$\text{—— red ——} \equiv \text{—— red ——}$$

$$\text{—— black ——} \equiv \text{—— black ——}$$

$$\text{- - green - -} \equiv \text{- - green - -}$$

$$\equiv \quad (\text{none})$$

Diagram-level options

$$A \xrightarrow{\sigma} \sin \circ \cos \circ \tan \xrightarrow{f} C \; \multimap \; D$$

CeTZ integration

Bézier

A

Corner edges

(−1, −1) f (1, −1)

f left f

(−1, 1) f (1, 1)

(−1, −1) f (1, −1)

f right f

(−1, 1) f (1, 1)

(−1, 1) f (1, 1)

f left f

(−1, −1) f (1, −1)

(−1, 1) f (1, 1)

f right f

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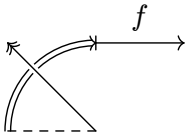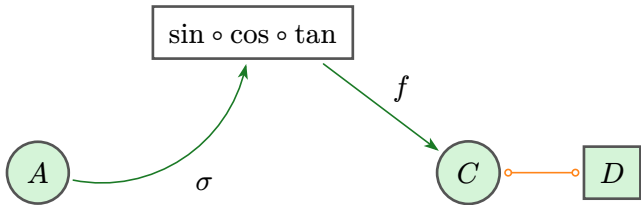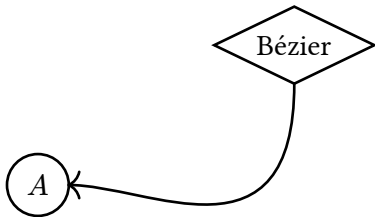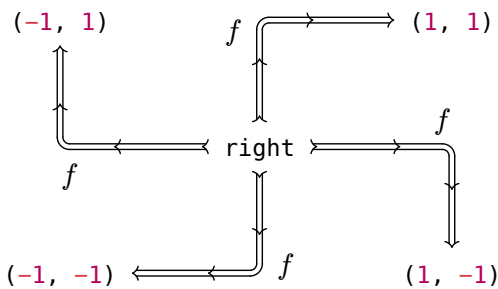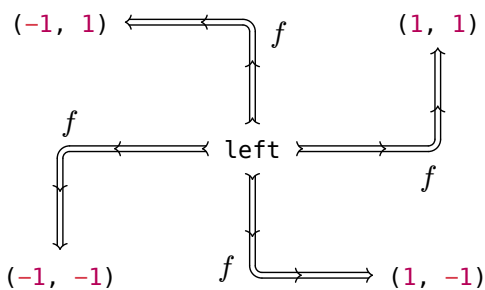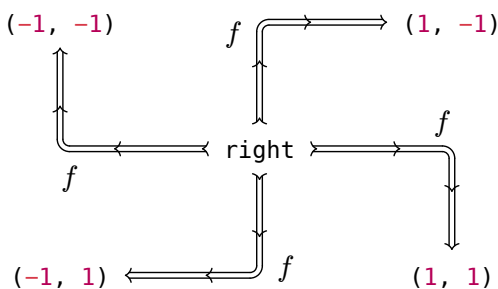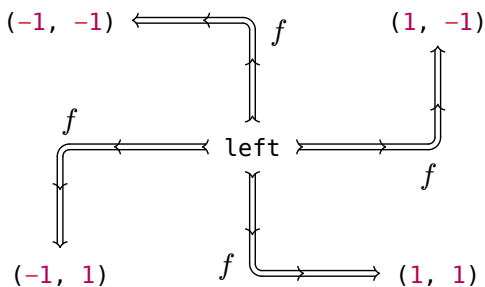
Double node strokes
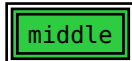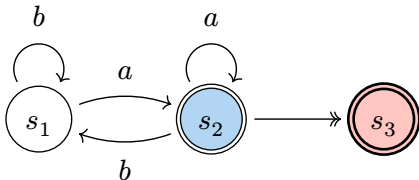
Relative and absolute extrusion lengths
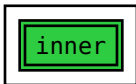
Custom node sizes

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

1cm

1cm
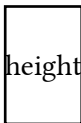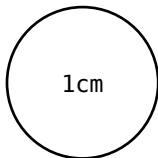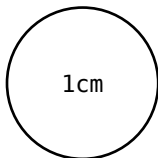
width   height   both

Node inset and outset

What 5mm inset should look like:

A diagram node with 5mm inset:
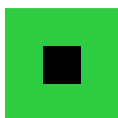
A diagram node with 5mm outset:
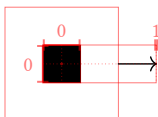
Circular insets:
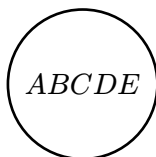
Example

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

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

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

Axes configuration

$(1, 1)$

(ltr, btt)

$(0, 0)$ ⟶ $(1, 0)$

0   1

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

(btt, ltr)

$(0, 0)$

0   1

0   1

$(0, 0)$ ⟶ $(1, 0)$

(ltr, ttb)

$(1, 1)$

0   1

$(0, 0)$

(ttb, ltr)

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

$(1, 1)$

(rtl, btt)

$(1, 0)$ ⟵ $(0, 0)$

1   0

$(1, 1)$ $(1, 0)$
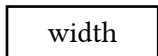
(btt, rtl)

$(0, 0)$

1   0

1   0

$(1, 0)$ ⟵ $(0, 0)$

(rtl, ttb)

$(1, 1)$

1   0

$(0, 0)$

(ttb, rtl)

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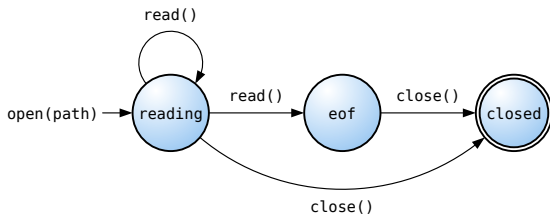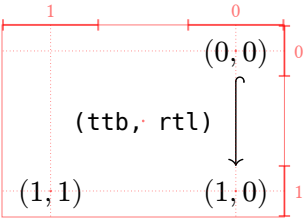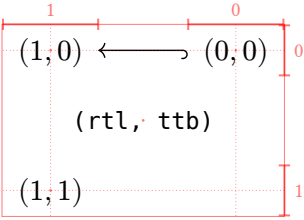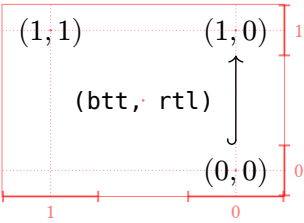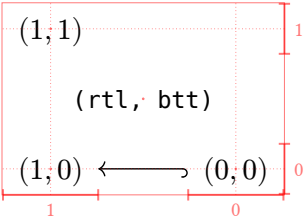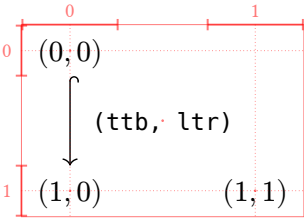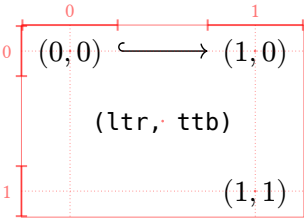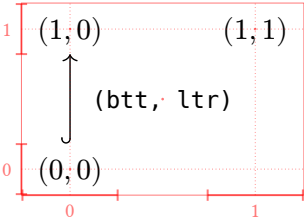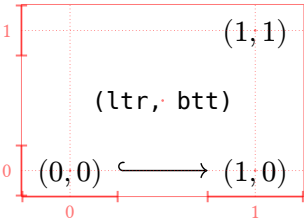
Implicit `from` and `to` points

label   label   label
$\longrightarrow$ $\longrightarrow$ $\longrightarrow$

next

prev
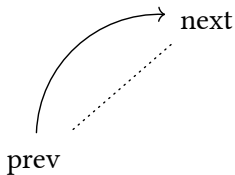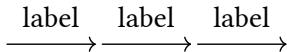
Edge positional arguments

Explicit named arguments versus implicit positional arguments.

Each row should be the same thing repeated.

$$A \longrightarrow B \quad A \longrightarrow B \quad A \longrightarrow B$$

$$A \overset{\pi}{\longrightarrow} B \quad A \overset{\pi}{\longrightarrow} B \quad A \overset{\pi}{\longrightarrow} B$$

$$A \overset{\tau}{\longmapsto} B \quad A \overset{\tau}{\longmapsto} B \quad A \overset{\tau}{\longmapsto} B$$

$$A \overset{+}{\longrightarrow\mkern-18mu\rightarrow} B \quad A \overset{+}{\longrightarrow\mkern-18mu\rightarrow} B \quad A \overset{+}{\longrightarrow\mkern-18mu\rightarrow} B$$
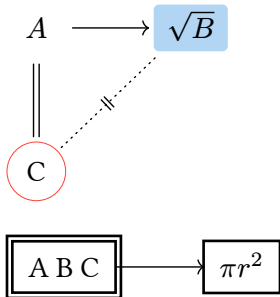
Math-mode diagrams

The following diagrams should be identical:

$$
\begin{array}{ccc}
G & \xrightarrow{\;\;f\;\;} & \mathrm{im}(f) \\
\pi \big\downarrow & \nearrow_{\tilde{f}} & \\
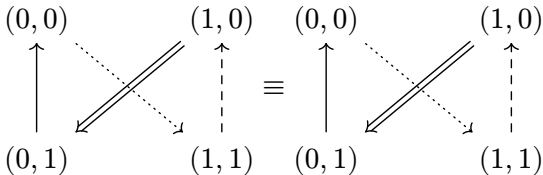G/\ker(f) & &
\end{array}
$$

$$
\begin{array}{ccc}
G & \xrightarrow{\;\;f\;\;} & \mathrm{im}(f) \\
\pi \big\downarrow & \nearrow_{\tilde{f}} & \\
G/\ker(f) & &
\end{array}
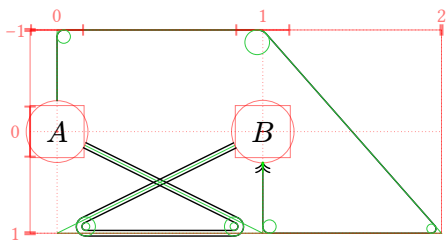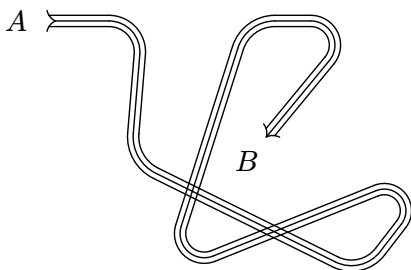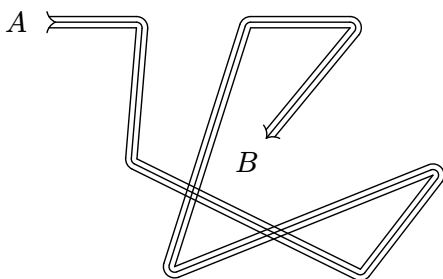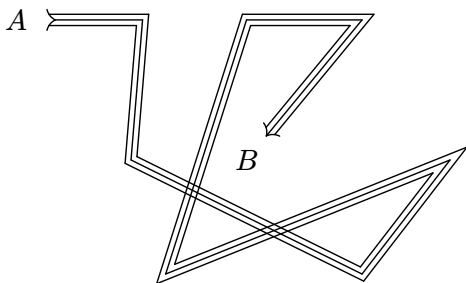$$

Nodes in math-mode

$A \longrightarrow \sqrt{B}$

C

$A\,B\,C \longrightarrow \pi r^2$

Relative node coordinates
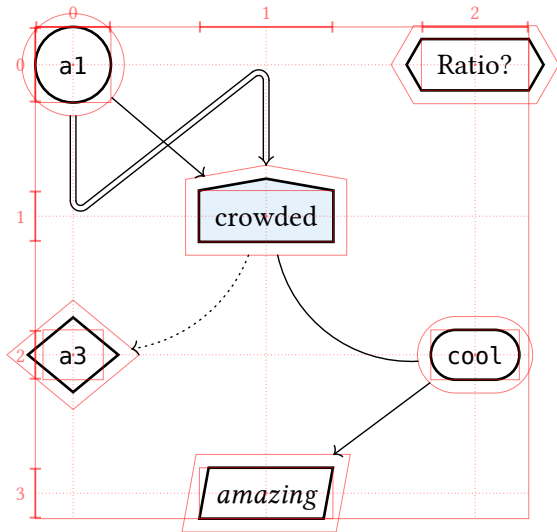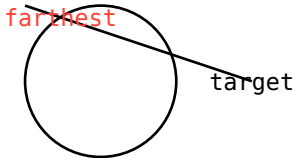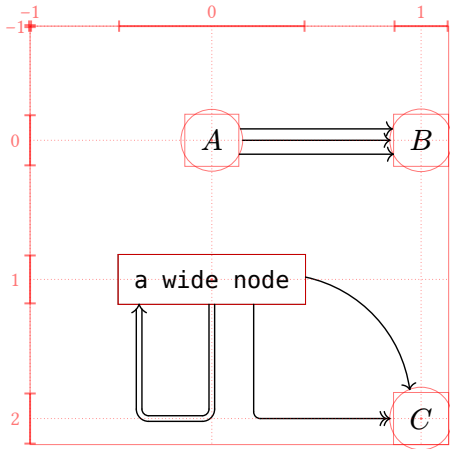
Edge paths

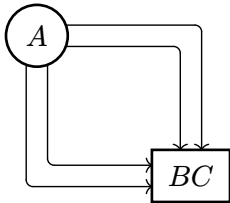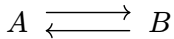# Dashed edge paths
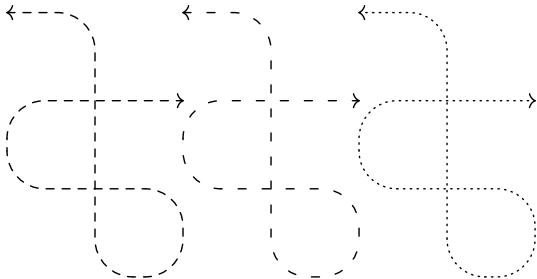
Custom node shapes
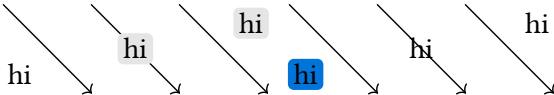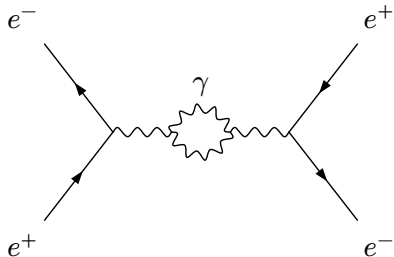
Intersection finding

Off-center edges

Edge shift

$A \rightleftarrows B$

$A \underset{\frown}{\overset{\frown}{}} B$

Label fill

hi

hi

hi

hi

hi

hi

hi

Line decorations

$A \longleftrightarrow B \longleftrightarrow C \longleftrightarrow$

e^- e^+

γ

e^+ e^-

$A \longrightarrow B$

$A \longleftarrow B$

$A \longleftrightarrow B$

$A \longleftrightarrow B$