Connectors

$$
\begin{array}{ccc}
X & \longrightarrow & Y \\
\downarrow & \nearrow & \\
Z & &
\end{array}
$$

f

Arc connectors

0   1

20deg
0deg
from → to
−50deg

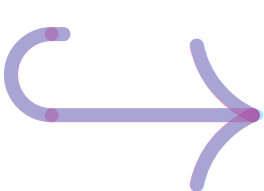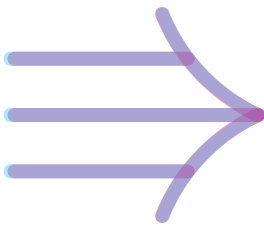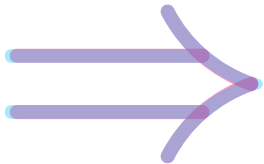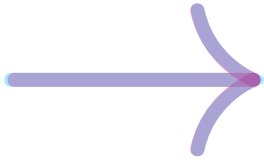X ⌢ Y

A
B

A → B

A → B

Matching math arrows

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

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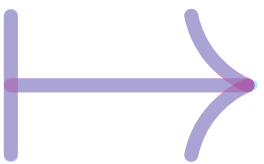
Double and triple lines

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

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

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

Arrow head shorthands

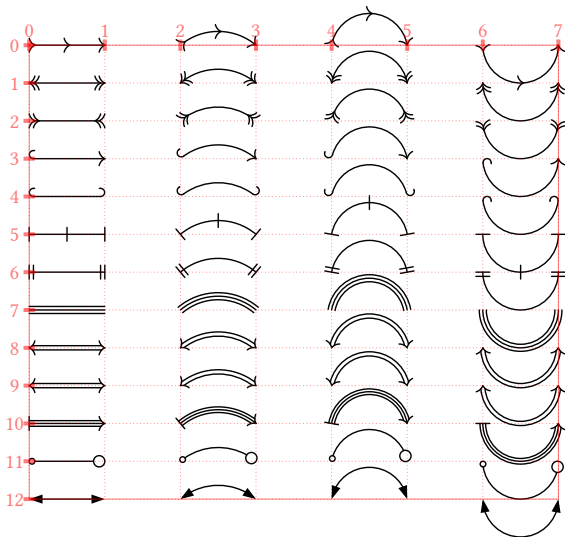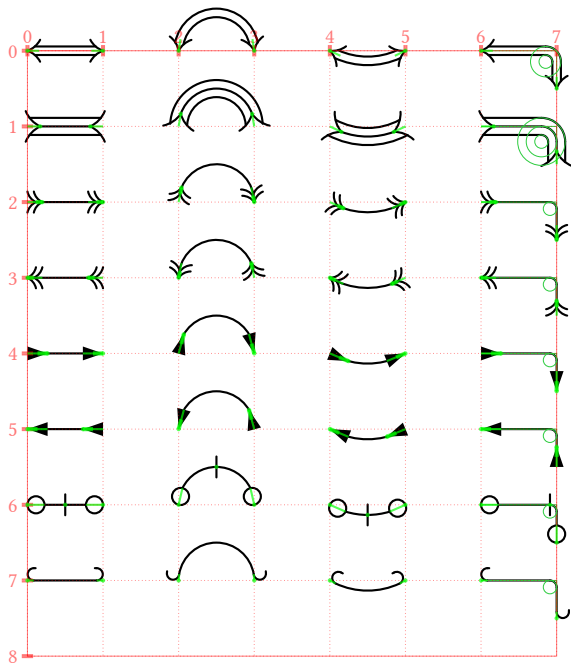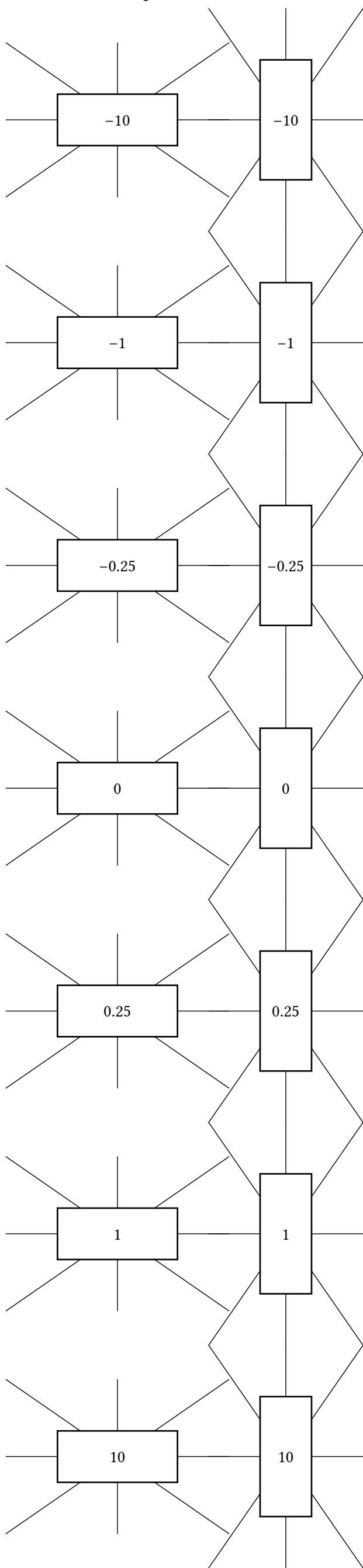|		
`"->"`	$=$	$\longrightarrow$
`"<-"`	$=$	$\longleftarrow$
`">-<"`	$=$	$\succ\!\!-\!\!\prec$
`"<->"`	$=$	$\longleftrightarrow$
`"<=>"`	$=$	$\Longleftrightarrow$
`"<==>"`	$=$	$\Longleftrightarrow$
`"|->"`	$=$	$\longmapsto$
`"|=>"`	$=$	$\Longmapsto$
`">->"`	$=$	$\succ\!\!\longrightarrow$
`"<<->>"`	$=$	$\lll\!\!\longrightarrow\!\!\ggg$
`">>-<<"`	$=$	$\ggg\!\!\longrightarrow\!\!\lll$
`">>>-}>"`	$=$	$\Rrightarrow\!\!\longrightarrow$
`"hook->"`	$=$	$\hookrightarrow$
`"hook'--hook"`	$=$	$\subset\!-\!-\!-\!\supset$
`"|=|"`	$=$	$\Longleftarrow\!\!\mid$
`"||-||"`	$=$	$\Vdash\!\!\longrightarrow\!\!\dashv$
`"|||-|||"`	$=$	$\#\!\!\longrightarrow\!\!\#$
`"/--\\"`	$=$	$\nearrow\!-\!-\!-\!\searrow$
`"\\=\\"`	$=$	$\Longleftarrow$
`"/=/"`	$=$	$\Longrightarrow$
`"x-X"`	$=$	$\times\!\!\longrightarrow\!\!\times$
`">>-<<"`	$=$	$\gg\!\!\longrightarrow\!\!\ll$
`"harpoon-harpoon'"`	$=$	$\leftharpoondown\!\!\longrightarrow\!\!\rightharpoondown$
`"harpoon'-<<"`	$=$	$\leftharpoonup\!\!\longrightarrow\!\!\ll$
`"<--hook'"`	$=$	$\leftarrow\!-\!-\!-\!\supset$
`"|..|"`	$=$	$\mid\!\cdots\cdots\!\mid$
`"hooks--hooks"`	$=$	$\subset\!-\!-\!-\!\supset$
`"o-0"`	$=$	$\circ\!\!\longrightarrow\!\!\bigcirc$
`"0-o"`	$=$	$\bigcirc\!\!\longrightarrow\!\!\circ$
`"*-@"`	$=$	$\bullet\!\!\longrightarrow\!\!\bullet$
`"o==0"`	$=$	$\circ\!\!\Longleftarrow\!\!\bigcirc$
`"||->>"`	$=$	$\Vdash\!\!\longrightarrow\!\!\gg$
`"<|-|>"`	$=$	$\blacktriangleleft\!\!\longrightarrow\!\!\blacktriangleright$
`"|>-<|"`	$=$	$\blacktriangleright\!\!\longrightarrow\!\!\blacktriangleleft$
`"-|-"`	$=$	$\longrightarrow\!\!\mid\!\!\longleftarrow$
`"hook-/->"`	$=$	$\hookrightarrow\!\!\nearrow\!\!\longrightarrow$
`"<{-}>"`	$=$	$\longleftrightarrow$

Bending arrows

Fine mark angle corrections

Defocus adjustment

−10	−10
−1	−1
−0.25	−0.25
0	0
0.25	0.25
1	1
10	10

Label side

left

center

right

left

center

right

left

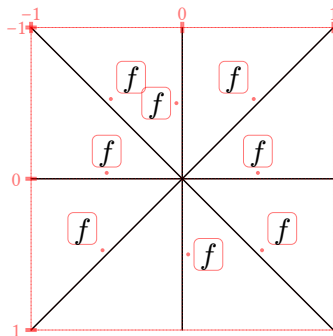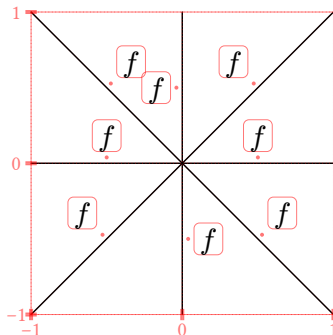center

right

left

left

left

center

center

center
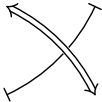
right

right

right

Automatic label placement

Default placement above the line.
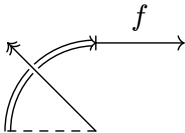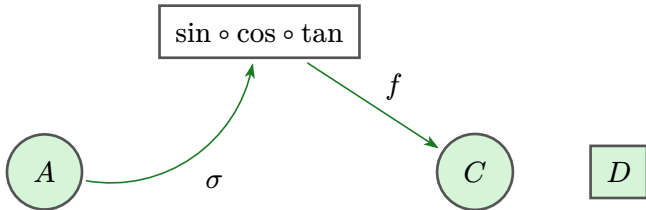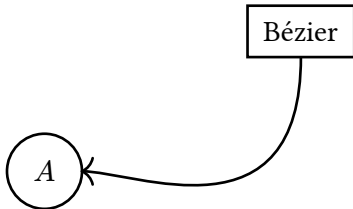

Reversed y-axis:

Crossing connectors
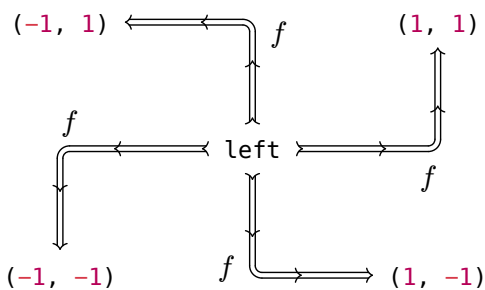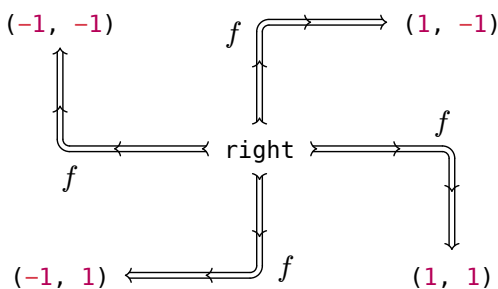
edge() argument shorthands

Diagram-level options

CeTZ integration
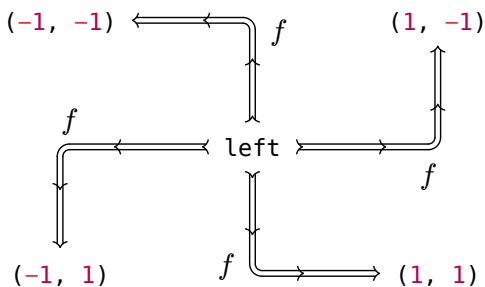
Bézier

A

Node bounds, inset, and outset

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

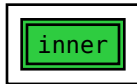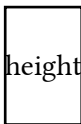$(-1, -1)$ f $(1, -1)$
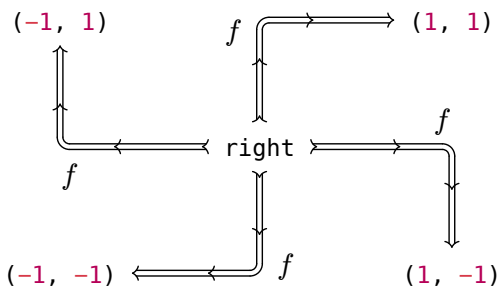
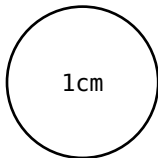# Double node strokes
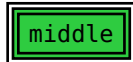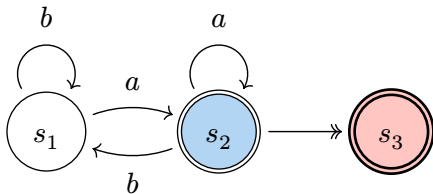
Relative and absolute extrusion lengths

Custom node sizes

Make sure provided dimensions are exact, not affected by node `inset`.
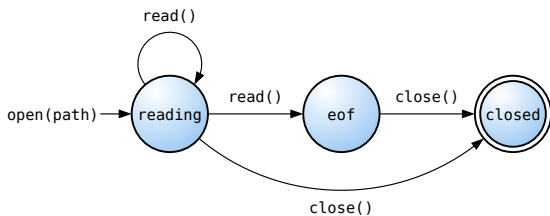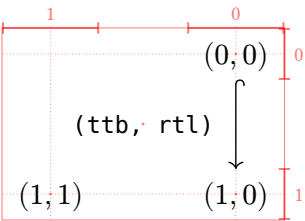
1cm

width height both

1cm

Example

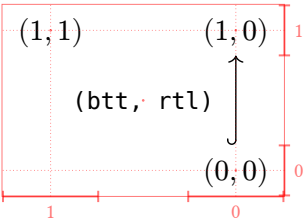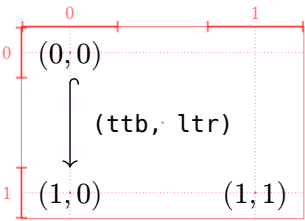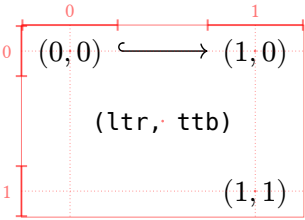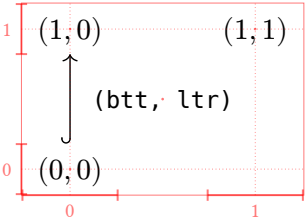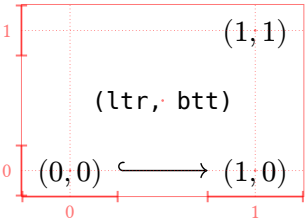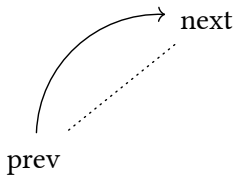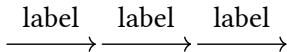Make sure node or edge labels don't pick up equation numbers!

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

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

Axes configuration
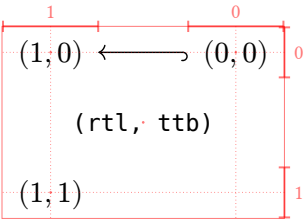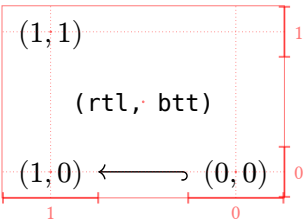
Implicit `from` and `to` points

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.

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

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

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

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

Symbol arrow aliases

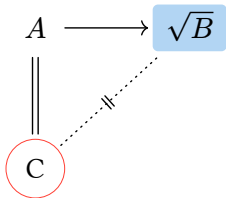| Math	Unicode	Mark	Diagram
$\rightarrow$	$\rightarrow$	`->`	⟶
$\longrightarrow$	☐?	`->`	⟶
$\leftarrow$	$\leftarrow$	`<-`	⟵
$\leftrightarrow$	$\leftrightarrow$	`<->`	⟷
$\longleftrightarrow$	☐?	`<->`	⟷
$\twoheadrightarrow$	☐?	`->>`	⟶»
$\twoheadleftarrow$	☐?	`<<-`	«⟵
$\rightarrowtail$	☐?	`>->`	⟩⟶
$\leftarrowtail$	☐?	`<-<`	⟵⟨
$\Rightarrow$	$\Rightarrow$	`=>`	⟹
$\Longrightarrow$	☐?	`=>`	⟹
$\Longleftarrow$	☐?	`<=`	⟸
$\Leftrightarrow$	$\Leftrightarrow$	`<=>`	⟺
$\Longleftrightarrow$	☐?	`<=>`	⟺
$\mapsto$	$\mapsto$	`|->`	↦
$\Mapsto$	☐?	`|=>`	⤇
$\rightsquigarrow$	☐?	none!	none!
$\leftsquigarrow$	☐?	none!	none!
$\hookrightarrow$		`hook->`	⟾
$\hookleftarrow$		`<-hook'`	⟽

Math-mode diagrams

The following diagrams should be identical:

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

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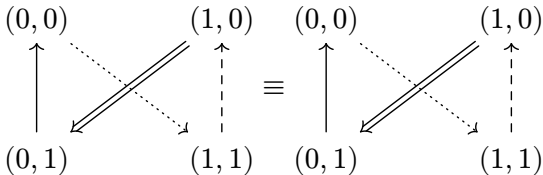G/\ker(f) & &
\end{array}
$$

Nodes in math-mode
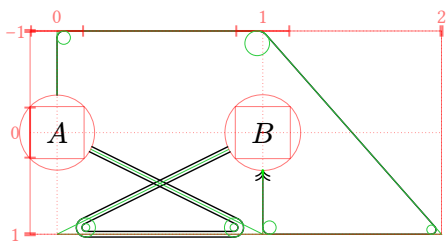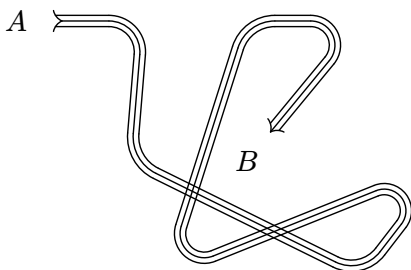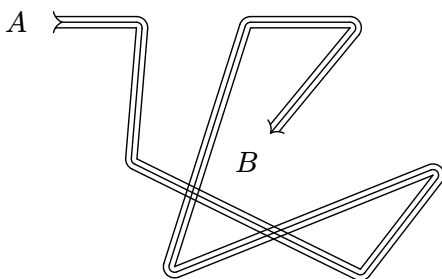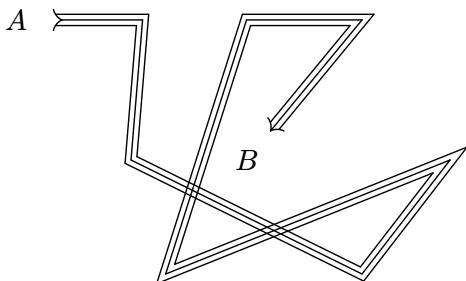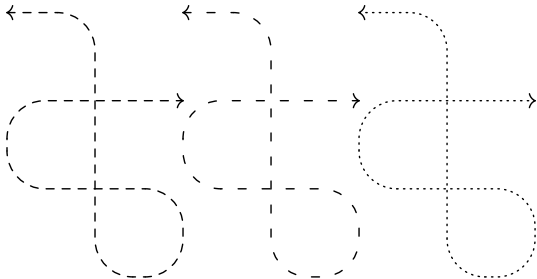
$$A \longrightarrow \boxed{\sqrt{B}}$$

$A \Longrightarrow C$

$C \cdots \sqrt{B}$

Relative node coordinates

$$G \xrightarrow{\ f\ } \mathrm{im}(f)$$

$\pi \downarrow \qquad \tilde{f}$

$$G/\ker(f)$$

$(0,0) \qquad (1,0) \qquad (0,0) \qquad (1,0)$

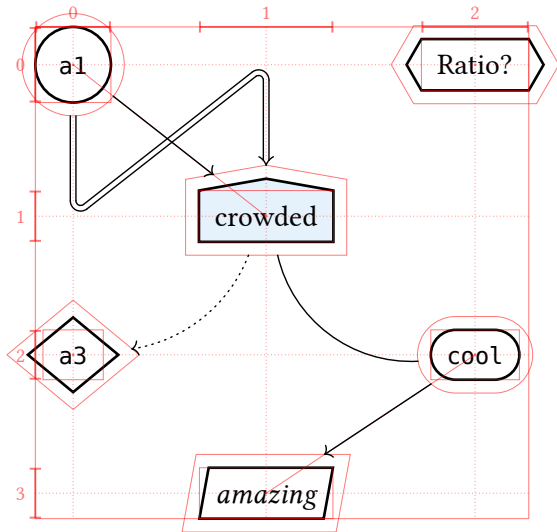$\equiv$

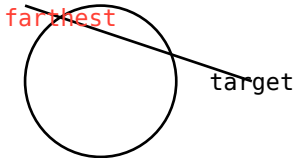$(0,1) \qquad (1,1) \qquad (0,1) \qquad (1,1)$

Edge paths

Dashed edge paths

Custom node shapes

Intersection finding

Off-center edges

A   B

a wide node

C

Edge shift

$A \longleftrightarrow B$

$A \qquad B$

Label fill

hi hi hi hi hi hi hi