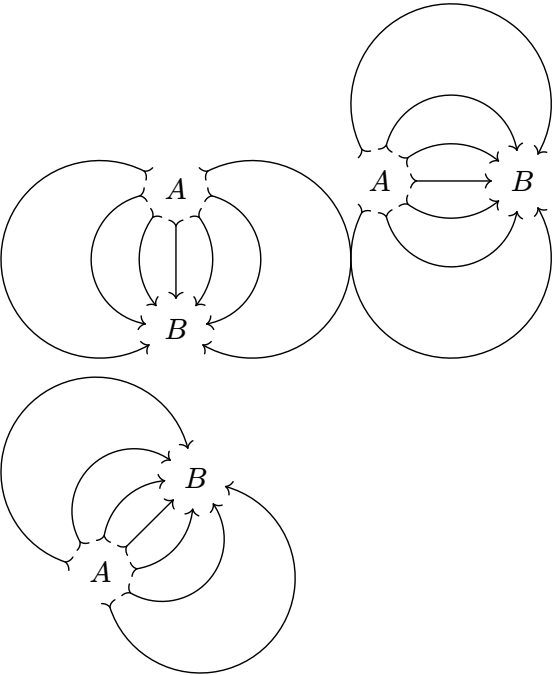
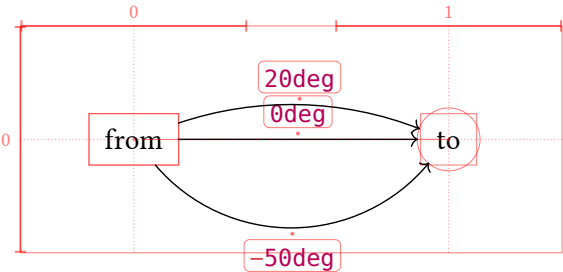


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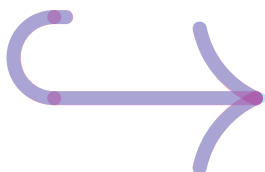
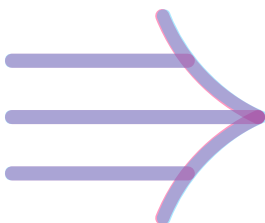
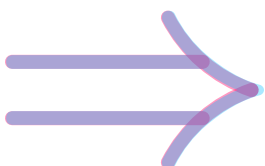
# Arc edges



# Matching math arrows

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

Our output versus reference symbol in default math font.



## Double and triple lines

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

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

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

# Arrow head shorthands

"->" =  $\longrightarrow$

"<-" =  $\longleftarrow$

">-<" =  $\rightrightarrows$

"<->" =  $\longleftrightarrow$

"<=>" =  $\longleftrightarrow$

"<==>" =  $\longleftrightarrow$

"|->" =  $\longrightarrow$

"|=>" =  $\longrightarrow$

">->" =  $\longrightarrow$

"<<->>" =  $\longleftrightarrow$

">>-<<" =  $\longleftrightarrow$

">>>-}>" =  $\longrightarrow$

"hook->" =  $\hookrightarrow$

"hook' - - hook" =  $\hookleftarrow \text{---} \hookrightarrow$

"|=|" =  $\longleftrightarrow$

"|||-||" =  $\longleftrightarrow$

"||||-||||" =  $\longleftrightarrow$

"/- - \\" =  $\nearrow \text{---} \searrow$

"\\=\\" =  $\longleftrightarrow$

"/=/" =  $\longleftrightarrow$

"x-X" =  $\times \longrightarrow \times$

">>-<<" =  $\longleftrightarrow$

"harpoon-harpoon'" =  $\longleftarrow \text{---} \longrightarrow$

"harpoon' -<<" =  $\longleftarrow \text{---} \llcorner$

"<- - hook'" =  $\longleftarrow \text{---} \hookrightarrow$

"|. . |" =  $| \cdots \cdots |$

"hooks - - hooks" =  $\{ \text{---} \}$

"o-0" =  $\circ \text{---} \bigcirc$

"0-o" =  $\bigcirc \text{---} \circ$

"\*-@" =  $\bullet \text{---} \bullet$

"o==0" =  $\circ \text{---} \bigcirc$

"||->>" =  $\longleftrightarrow$

"<|-|>" =  $\longleftrightarrow$































"|>-<|" =  $\longleftrightarrow$

"-|- " =  $\text{---} |$

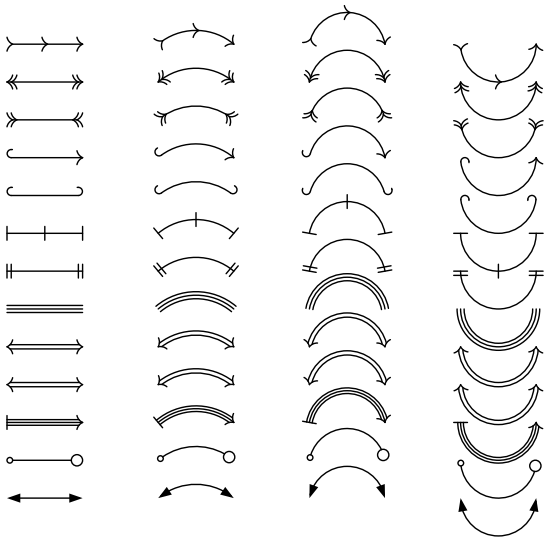
"hook-/->" =  $\hookrightarrow \text{---} \nearrow$

"<{-}>" =  $\longleftrightarrow$

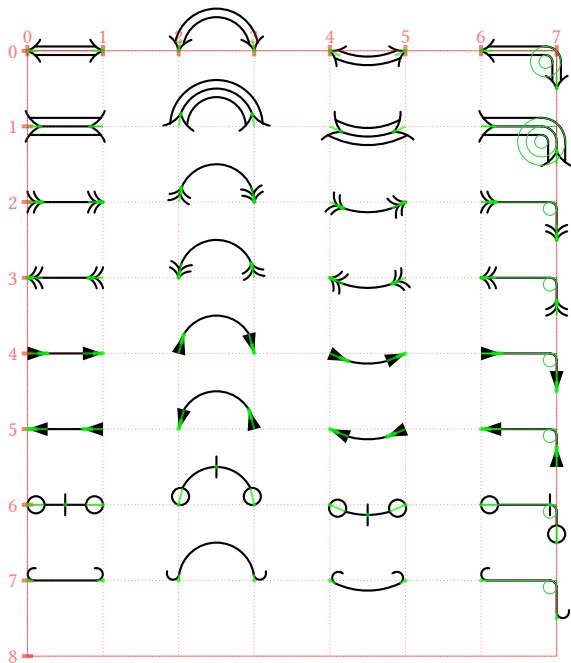
# Symbol arrow aliases

Math	Unicode	Mark	Diagram
$\rightarrow$	$\rightarrow$	->	
$\longrightarrow$		->	
$\leftarrow$	$\leftarrow$	<-	
$\leftrightarrow$	$\leftrightarrow$	<->	
$\longleftrightarrow$		<->	
$\Rightarrow$		->>	
$\Leftarrow$		<<-	
$\rightharpoonup$		>->	
$\leftharpoonup$		<-<	
$\Rightarrow$	$\Rightarrow$	=>	
$\Longrightarrow$		=>	
$\Leftarrow$		<=	
$\Leftrightarrow$	$\Leftrightarrow$	<=>	
$\Leftrightarrow$		<=>	
$\mapsto$	$\mapsto$	->	
$\Rrightarrow$		=>	
$\rightsquigarrow$		none!	none!
$\leftsquigarrow$		none!	none!
$\hookrightarrow$		hook->	
$\hookleftarrow$		<-hook'	

# Bending arrows

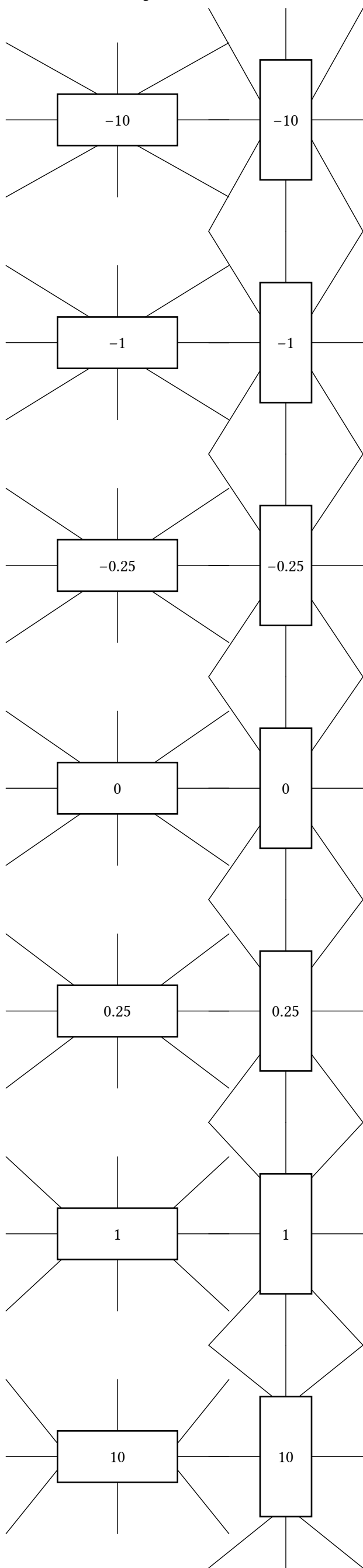


# Fine mark angle corrections






## Defocus adjustment




# Label side


left 

\center>

  
right

left  


-center>

  
right

left  


\center<

  
right

left 


left 


left 

  
center  


  
center  


  
center  

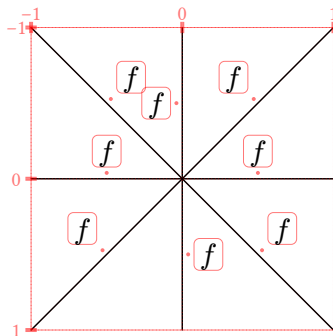

 right

 right

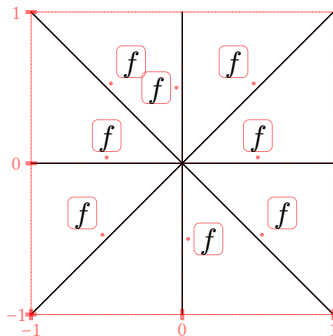
 right

# Automatic label placement

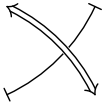
Default placement above the line.



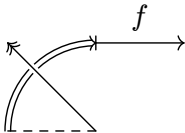
Reversed  $y$ -axis:



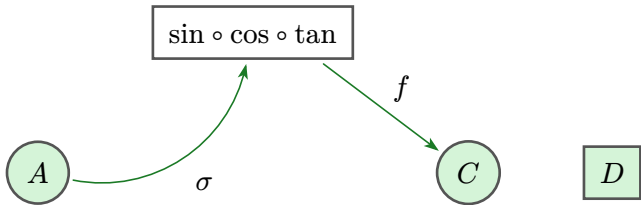
# Crossing connectors



## edge( ) argument shorthands



# Diagram-level options



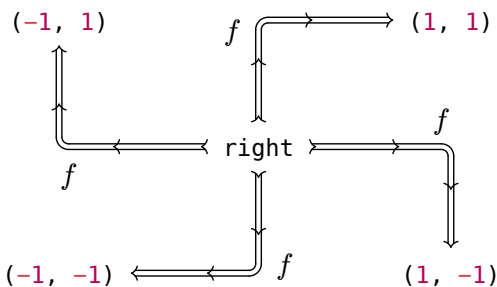
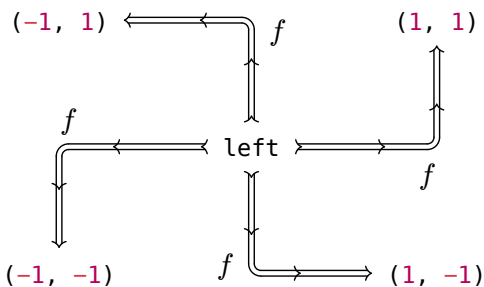
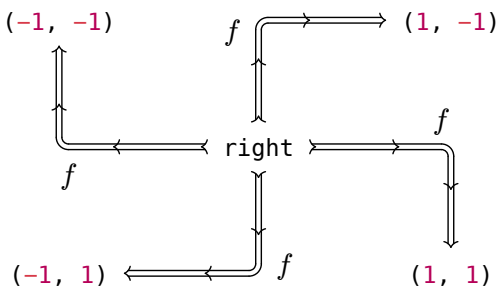
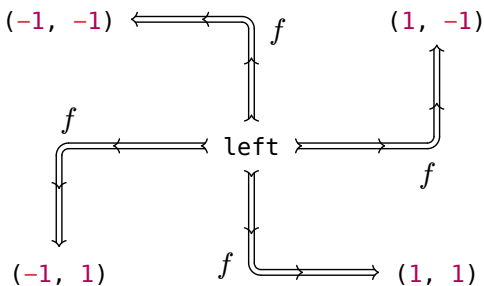
# CeTZ integration

TODO!

Bézier

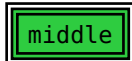
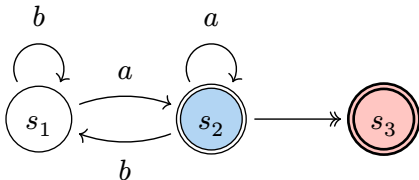


## Corner edges

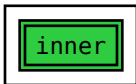




# Double node strokes

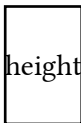
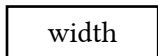
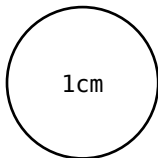


Relative and absolute extrusion lengths



# Custom node sizes

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



both

# Node inset and outset

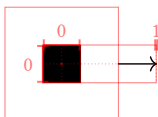
What 5mm inset should look like:



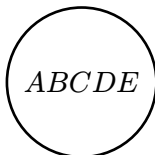
A diagram node with 5mm inset:



A diagram node with 5mm outset:



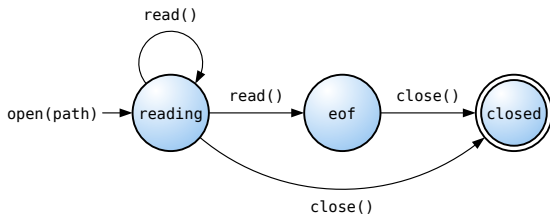
Circular insets:



# Example

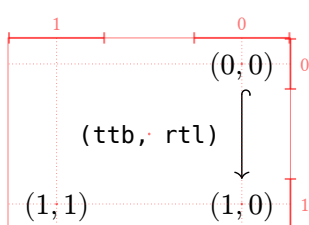
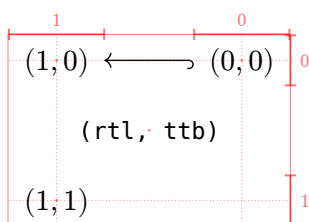
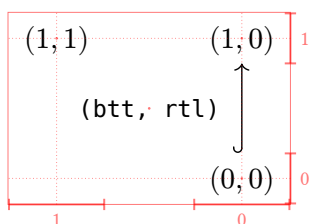
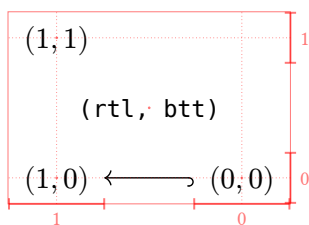
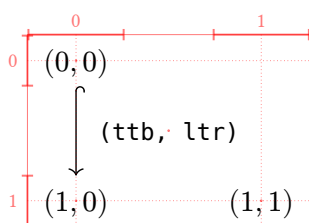
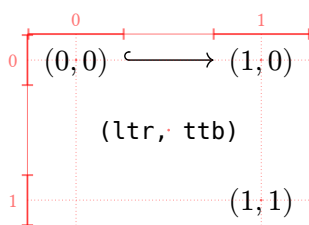
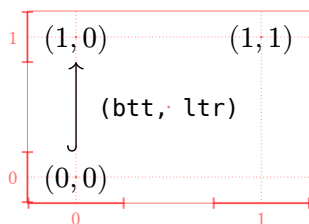
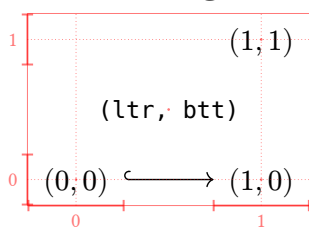
Make sure node or edge labels don't pick up equation numbers!

$$a^2 \quad (1)$$

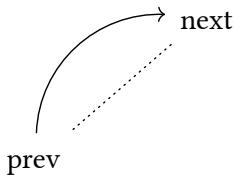
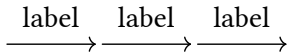


$$b^2 \quad (2)$$

# Axes configuration



# Implicit from and to points



# Edge positional arguments

Explicit named arguments versus implicit positional arguments.

Each row should be the same thing repeated.

$$\begin{array}{lll} A \longrightarrow B & A \longrightarrow B & A \longrightarrow B \\ A \xrightarrow{\pi} B & A \xrightarrow{\pi} B & A \xrightarrow{\pi} B \\ A \xrightarrow{\tau} B & A \xrightarrow{\tau} B & A \xrightarrow{\tau} B \\ A \xrightarrow{+} B & A \xrightarrow{+} B & A \xrightarrow{+} B \end{array}$$

# Math-mode diagrams

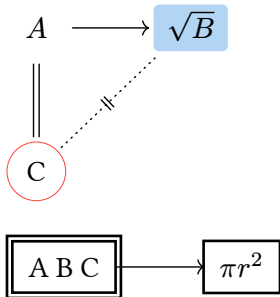
The following diagrams should be identical:

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

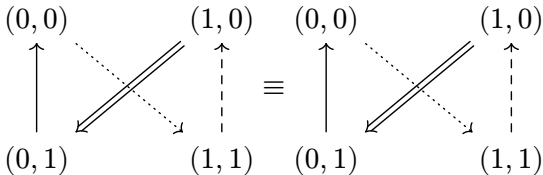
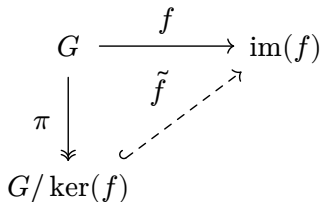
$$\begin{array}{ccc} G & \xrightarrow{f} & \operatorname{im}(f) \\ \pi \downarrow & \nearrow \tilde{f} & \\ G/\ker(f) & & \end{array}$$



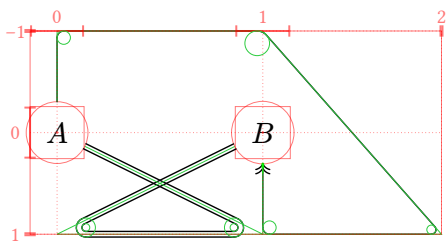
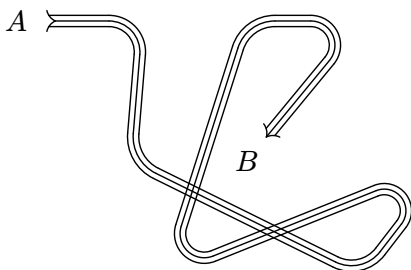
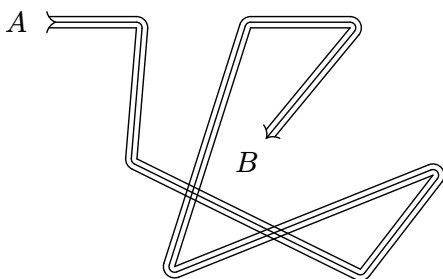
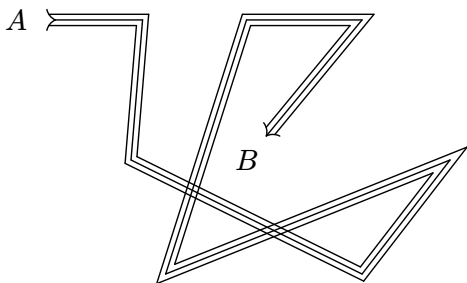
# Nodes in math-mode



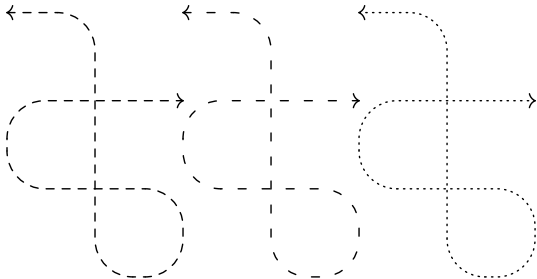
# Relative node coordinates



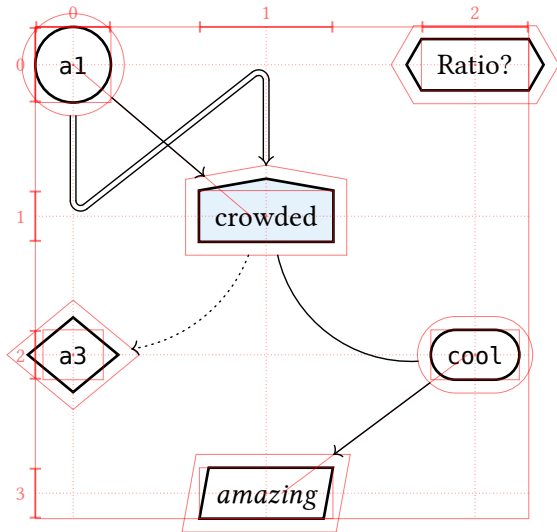
# Edge paths



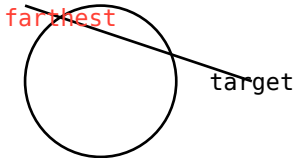
## Dashed edge paths



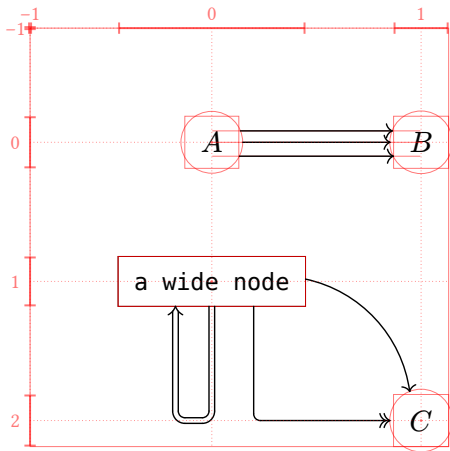
# Custom node shapes



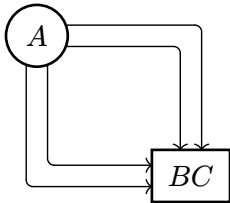
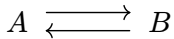
# Intersection finding



# Off-center edges



# Edge shift





# Label fill

