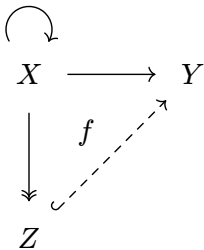
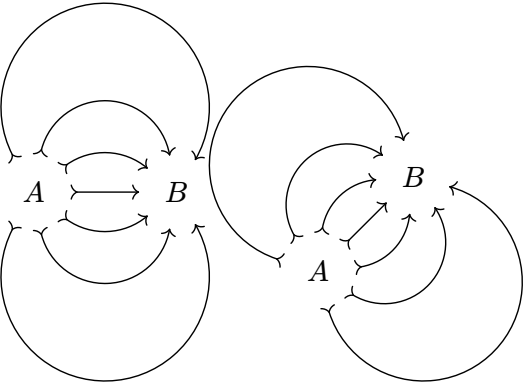
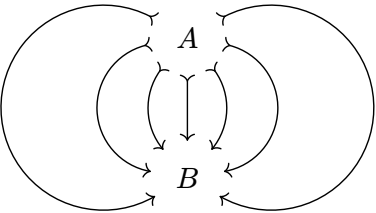
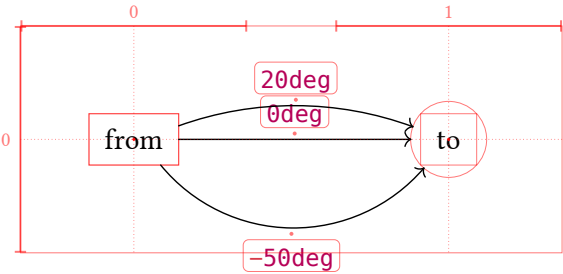


# Connectors



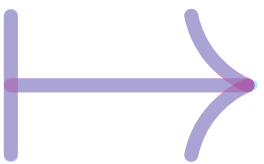
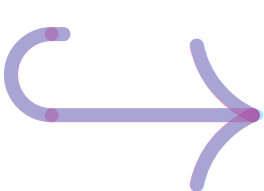
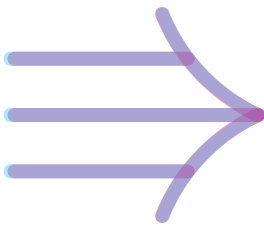
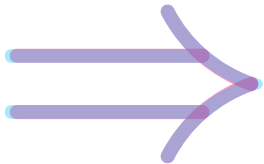
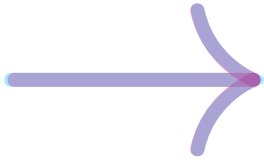
# Arc connectors



# Matching math arrows

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

Compare **our output** to the **reference symbol** in default math font.




## Double and triple lines


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


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


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


# Arrow head shorthands


"->" = 


"<-" = 


">-<" = 


"<->" = 


"<=>" = 


"<==>" = 


"|->" = 


"|=>" = 


">->" = 


"<<->>" = 


">>-<<" = 


">>>-}>" = 


"hook->" = 


"hook' - - hook" = 


"|=|" = 


"|||-||" = 


"||| - |||" = 


"/- - \\" = 


"\\ = \\" = 

"/=/" = 


"x-X" = 


">>-<<" = 


"harpoon-harpoon'" = 


"harpoon' -<<" = 


"<- - hook'" = 


"|. . |" = 


"hooks - - hooks" = 


"o-0" = 


"0-o" = 


"\*-@" = 

"o==0" = 


"||->>" = 

"<|-|>" = 

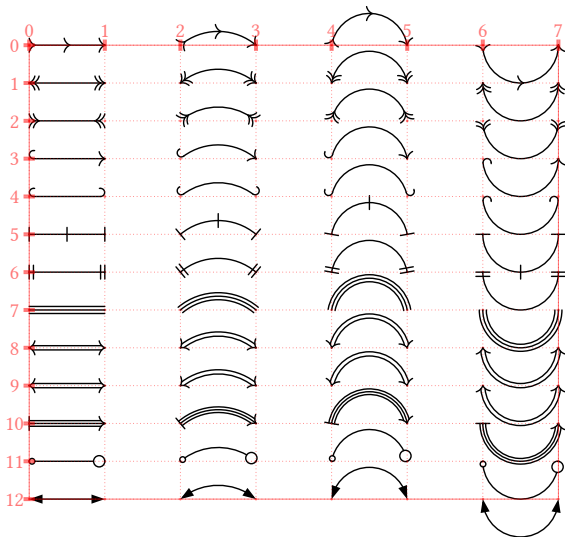
"|>-<|" = 

"-|- " = 

"hook-/->" = 

"<{-}>" = 

# Bending arrows





## Defocus adjustment







# Label side


left 

\center>

  
right

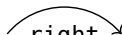
left  


-center>

  
right

left  


\center>

  
right

left 


left 


left 

  
center  


  
center  


  
center  

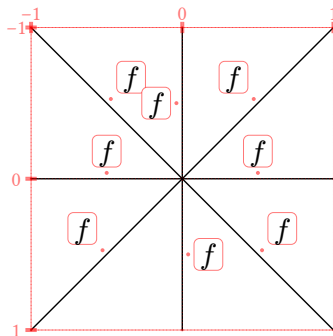

  
right

  
right

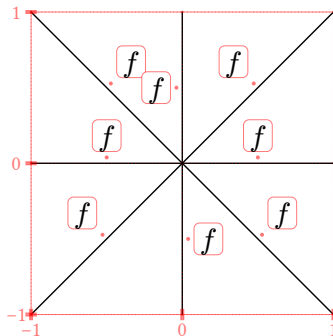
  
right

# Automatic label placement

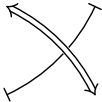
Default placement above the line.



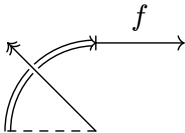
Reversed  $y$ -axis:



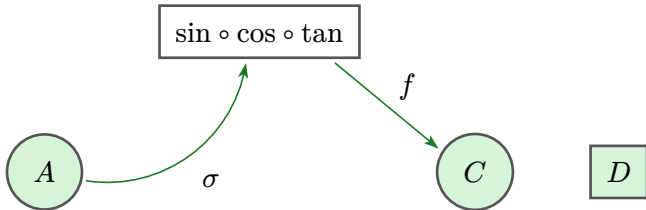
# Crossing connectors



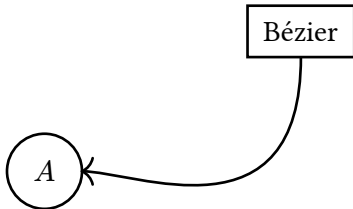
**edge( ) argument shorthands**



# Diagram-level options



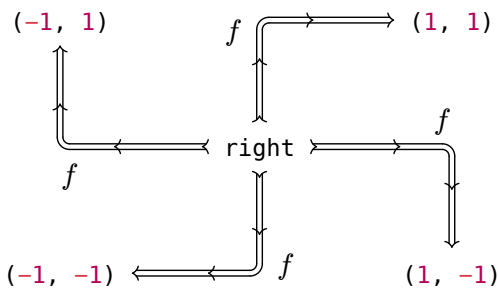
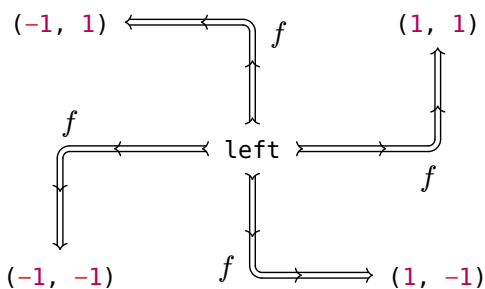
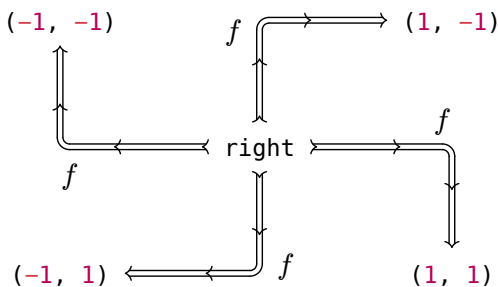
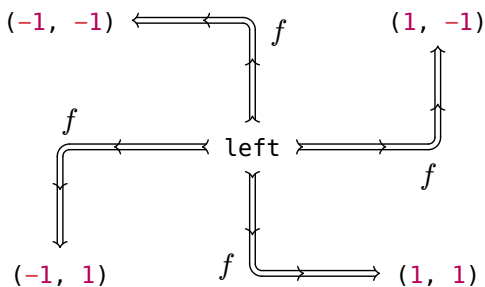
# CeTZ integration



# Node bounds, inset, and outset

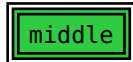
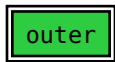
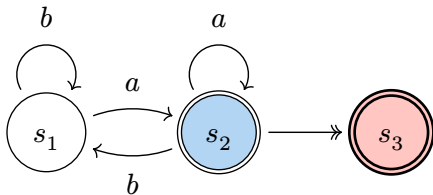


# Corner edges

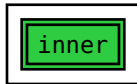




# Double node strokes

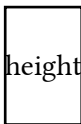


Relative and absolute extrusion lengths

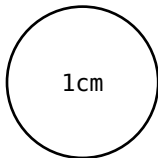


# Custom node sizes

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



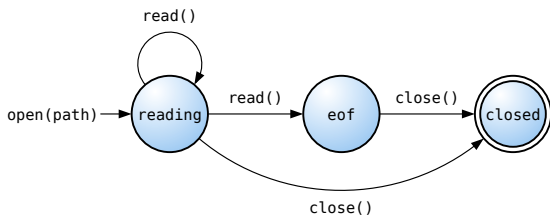
both



# Example

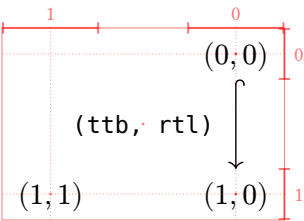
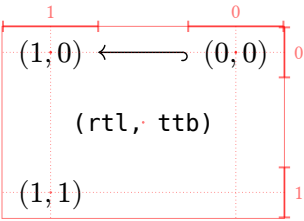
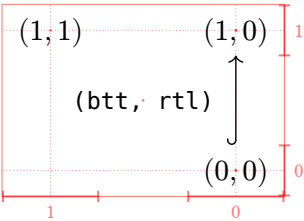
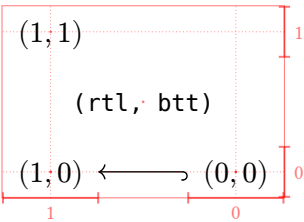
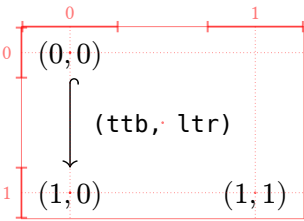
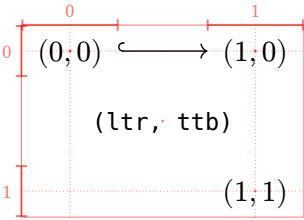
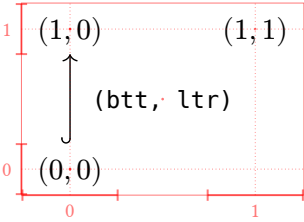
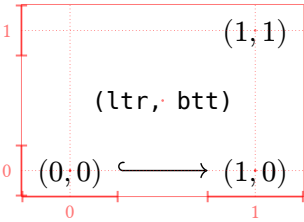
Make sure node or edge labels don't pick up equation numbers!

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

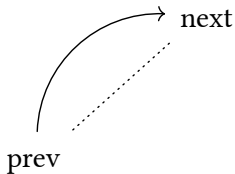
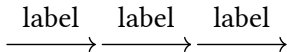


$$b^2 \quad (2)$$

# 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.

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

# Symbol arrow aliases

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

# Math-mode diagrams

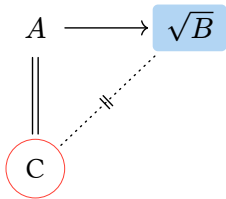
The following diagrams should be identical:

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

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

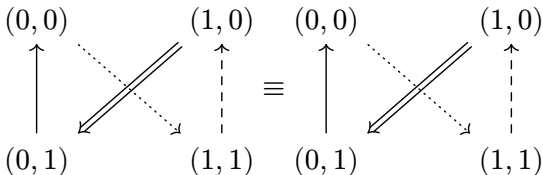


# Nodes in math-mode

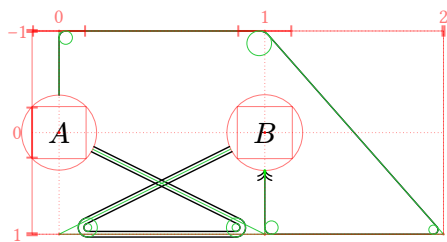
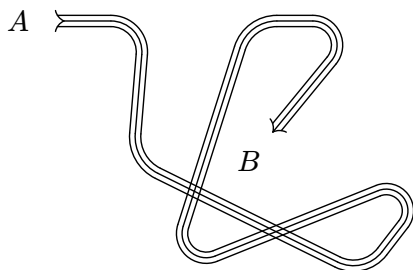
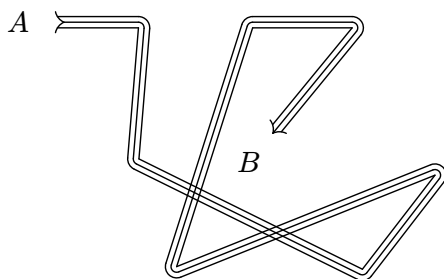
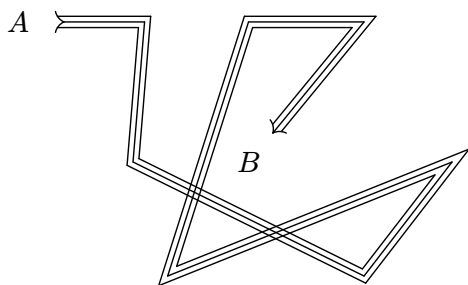


# Relative node coordinates

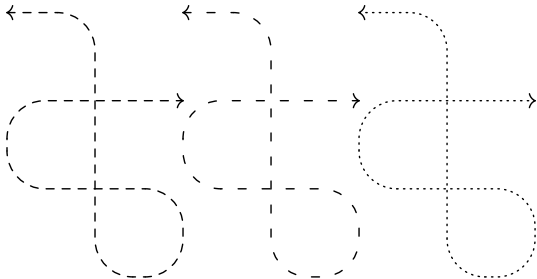
$$\begin{array}{ccc}
 G & \xrightarrow{f} & \text{im}(f) \\
 \downarrow \pi & \nearrow \tilde{f} & \\
 G/\ker(f) & & 
 \end{array}$$



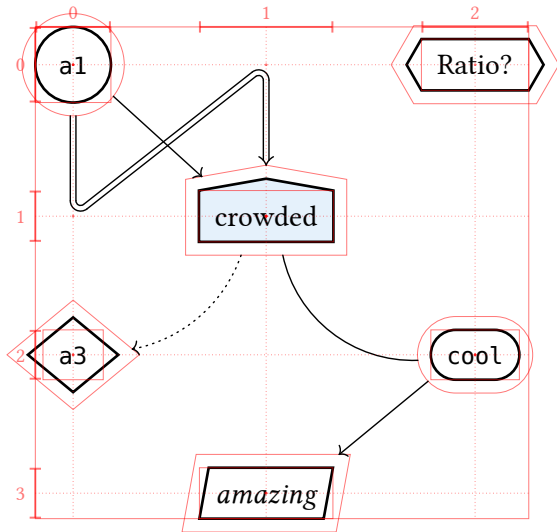
## Edge paths



## Dashed edge paths



# Custom node shapes



# Edge shift

$$A \begin{array}{c} \xrightarrow{\quad} \\ \xleftarrow{\quad} \end{array} B$$

$$A \begin{array}{c} \frown \\ \smile \end{array} B$$