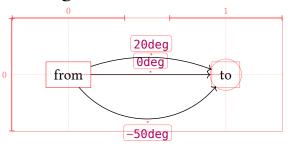
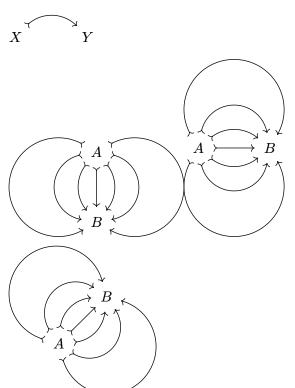
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# Arc edges

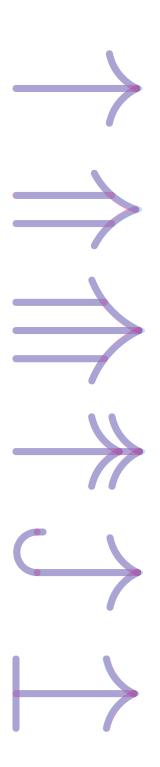




# Matching math arrows

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

Our output versus 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  $A \Rightarrow B$ 

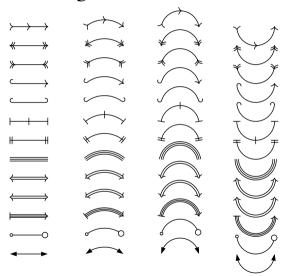
Diagram  $A \Longrightarrow^f B$  and equation  $A \Rightarrow B$ .

### Arrow head shorthands

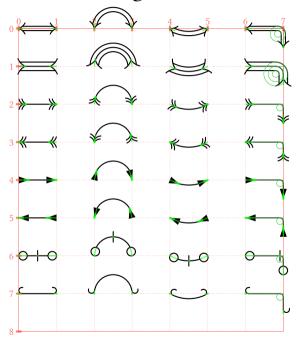
# Symbol arrow aliases

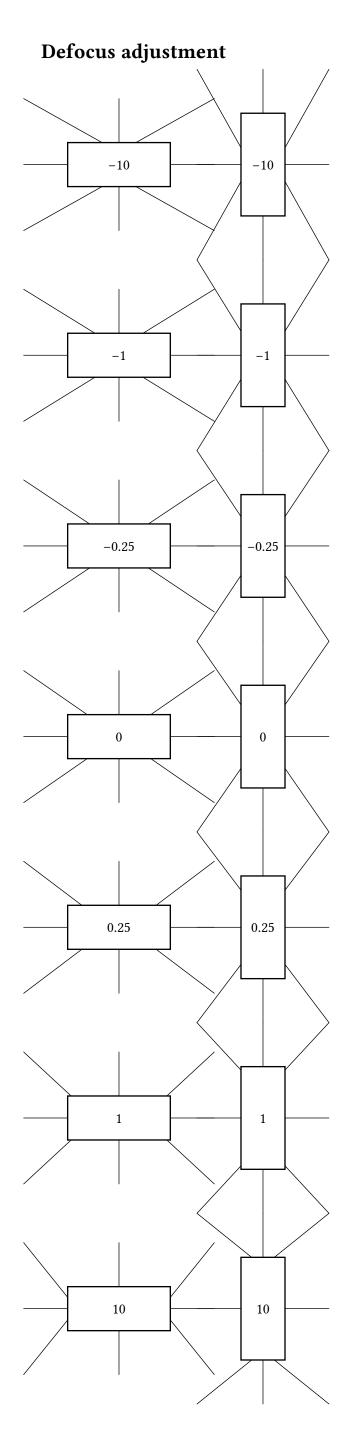
|                       | İ                 | i       | i  |
|-----------------------|-------------------|---------|--|
| Math                  | Unicode           | Mark    | Diagram  |
| $\rightarrow$         | $\rightarrow$     | ->      | $\longrightarrow$                                |
| $\longrightarrow$     | ?                 | ->      | $\longrightarrow$                                |
| $\leftarrow$          | <b>←</b>          | <-      | <del></del>                                      |
| $\leftrightarrow$     | $\leftrightarrow$ | <->     | $\longleftrightarrow$                            |
| $\longleftrightarrow$ | ?                 | <->     | $\longleftrightarrow$                            |
| <b>→</b>              | ?                 | ->>     | <del>*************************************</del> |
| <del>«</del>          | ?                 | <<-     | *  |
| $\rightarrow$         | ?                 | >->     | $\longrightarrow$                                |
| $\leftarrow$          | ?                 | <-<     | <b>←</b>   |
| $\Rightarrow$         | $\Rightarrow$     | =>      | $\Longrightarrow$                                |
| $\Rightarrow$         | ?                 | =>      | $\Longrightarrow$                                |
| $\leftarrow$          | ?                 | <=      | <del></del>                                      |
| $\Leftrightarrow$     | $\Leftrightarrow$ | <=>     | $\iff$   |
| $\Leftrightarrow$     | ?                 | <=>     | $\longleftrightarrow$                            |
| $\mapsto$             | $\mapsto$         | ->      | $\longmapsto$                                    |
| $\Rightarrow$         | ?                 | =>      | $\longmapsto$                                    |
| ^>                    | ?                 | none!   | none!  |
| ₩                     | ?                 | none!   | none!  |
| $\hookrightarrow$     |                   | hook->  | $\hookrightarrow$                                |
| $\leftarrow$          |                   | <-hook' | <del></del>                                      |

# Bending arrows

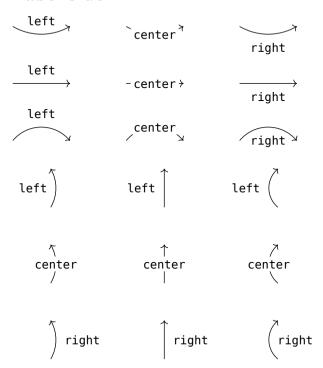


# Fine mark angle corrections



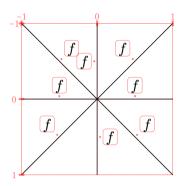


#### Label side

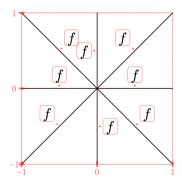


# Automatic label placement

Default placement above the line.



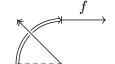
#### Reversed *y*-axis:



# **Crossing connectors**



## edge() argument shorthands

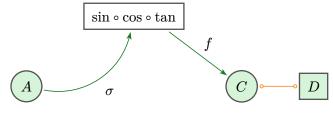


### edge() stroke

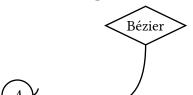


(none)

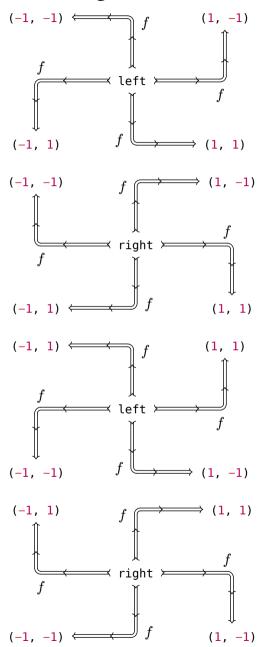
# **Diagram-level options**



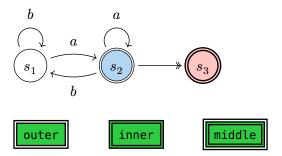
### **CeTZ** integration



## Corner edges



#### Double node strokes

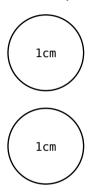


Relative and absolute extrusion lengths



#### Custom node sizes

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



width

height

b<mark>ot</mark>h

#### Node inset and outset

What 5mm inset should look like:



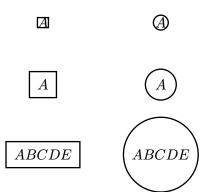
A diagram node with 5mm inset:



A diagram node with 5mm outset:

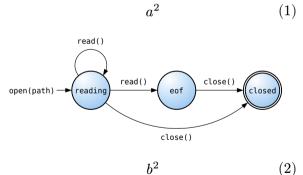


Circular insets:

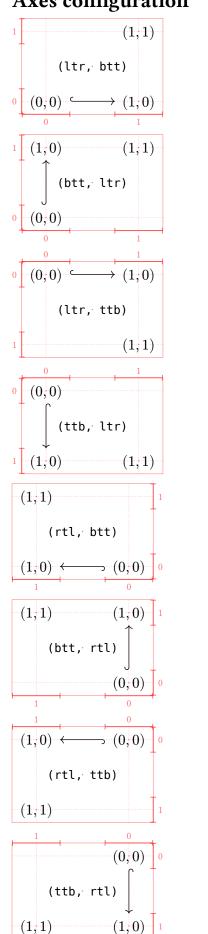


## Example

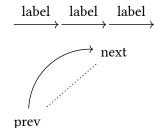
Make sure node or edge labels don't pick up equation numbers!



# 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.

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

$$A \xrightarrow{\tau} B A \xrightarrow{\tau} B A \xrightarrow{\tau} B A \xrightarrow{\tau} B$$

$$A \xrightarrow{\tau} B A \xrightarrow{\tau} B A \xrightarrow{\tau} B A \xrightarrow{\tau} B$$

$$A \xrightarrow{+} B A \xrightarrow{+} B A \xrightarrow{+} B$$

## Math-mode diagrams

The following diagrams should be identical:

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

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

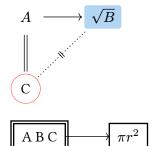
$$G/\ker(f)$$

$$G \xrightarrow{\tilde{f}} \operatorname{im}(f)$$

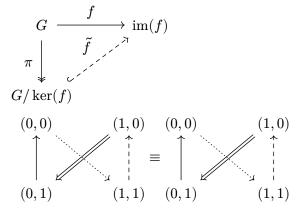
$$\pi \downarrow \qquad \tilde{f} \qquad \tilde{f} \qquad \tilde{f}$$

$$G/\ker(f)$$

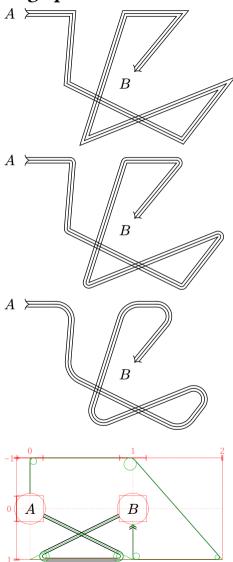
## Nodes in math-mode



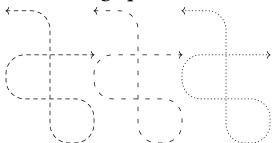
#### Relative node coordinates



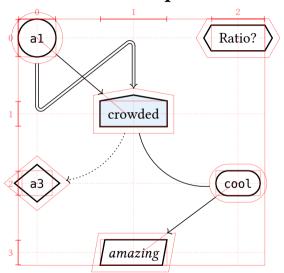
# Edge paths



# Dashed edge paths



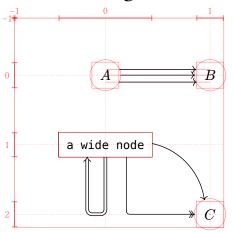
# Custom node shapes



## **Intersection finding**



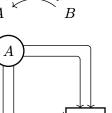
# Off-center edges



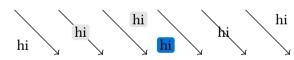
# Edge shift







### Label fill



#### Line decorations

