

# quiver

A modern commutative diagram editor

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31 July 2023

## Abstract

The `quiver` package provides compatibility with the `quiver` commutative diagram editor.

## 1 Usage

The `quiver` package is intended to be used in conjunction with the <https://q.uiver.app/> commutative diagram editor. It functions as a wrapper around the `tikz-cd` package that provides some extra `TikZ` styles, which are used in diagrams exported by the editor. However, these styles may be used in isolation of the editor.

To use the `quiver` package, add the following to the preamble of your document.

```
\usepackage{quiver}
```

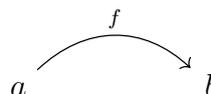
## 2 `TikZ` styles

The `quiver` package provides several styles that are useful in the rendering of commutative diagrams.

### 2.1 The curve style

The typical method of curving arrows in `tikz-cd` commutative diagrams is to use the `TikZ` `bend left` and `bend right` styles, together with the `in` and `out` parameters. These styles facilitate the bending of paths with respect to an angle. However, it is often more convenient to bend a path with respect to a distance (namely, the height of the apex of the curve). This may be achieved with the `curve` style<sup>1</sup>.

```
\begin{tikzcd}
  a \ar["f", rr,
  ↪ curve={height=-24pt}] && b
\end{tikzcd}
```



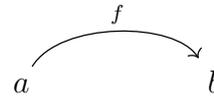
The `curve` style takes two (optional) named parameters.

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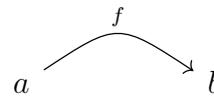
<sup>1</sup>The `curve` style is due to AndréC (<https://tex.stackexchange.com/users/138900/andr%C3%A9c>).

- `height` specifies the height of the apex of the curve. It is a signed distance (default 0).
- `pos` specifies the position of the control point for the curve. It is a value between 0.0 and 1.0 (default 0.35).

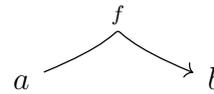
```
\begin{tikzcd}
a \ar["f", rr,
  ↪ curve={height=-24pt,
  ↪ pos=0.2}] && b
\end{tikzcd}
```



```
\begin{tikzcd}
a \ar["f", rr,
  ↪ curve={height=-24pt,
  ↪ pos=0.5}] && b
\end{tikzcd}
```



```
\begin{tikzcd}
a \ar["f", rr,
  ↪ curve={height=-24pt,
  ↪ pos=0.8}] && b
\end{tikzcd}
```



## 2.2 Arrowhead and tail styles

The `tikz-cd` package provides several arrowhead and tail styles. The `quiver` package provides the following additional styles.

Style	Appearance
tail reversed	$\longleftarrow\longrightarrow$
2tail	$\rightrightarrows$
2tail reversed	$\leftleftarrows$
no body	$\cdots\longrightarrow$

## 3 Version history

The `quiver` version number is tied to the editor version number. This is reflected in the history below: not every editor update corresponds to a package update.

<b>Version</b>	<b>Date</b>	<b>Release notes</b>
1.0.0	2020-11-10	First public version. Imports necessary packages and defines the <code>curve</code> style.
1.0.1	2020-11-27	Added the <code>tail reversed</code> , <code>2tail</code> , and <code>2tail reversed</code> styles.
1.1.0	2020-12-18	Added a dependency.
1.2.0	2021-01-11	Added the <code>no body</code> style.