

The `bguq` macro package for $\text{\LaTeX} 2_{\epsilon}$

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This file defines the package `bguq` which provides $\text{\LaTeX} 2_{\epsilon}$ access to the *Begriffsschrift* universal quantifier “ $\overset{\sim}{\smile}$ ” from the `bguq` font in a small number of sizes. These are designed for setting the *Begriffsschrift* diagrams used by Frege.

The package takes a single option which is an integer between 4 and 12, this specifying the line-thickness of the quantifier stroke in units of 1/10 pt for a document font-size of 10 pt. If the option is not specified then the value 8 will be assumed. Note that the size of the symbol produced will depend on the font size of the document (since the symbol needs to be wide enough to accommodate the variable quantified) and the line-thickness is scaled similarly — in a 12 pt document the line will be 1.2 times the thickness, and so on.

The package provides only two commands: the `\bguq` macro which, in math-mode, produces the quantifier symbol, and `\bguqwidth` which is the width of the symbol (for use in fancy placement). It is not expected that these commands will be used by end-users directly, rather they are intended for package writers.

Below we see the results in a test implementation in the `begriff` package by Josh Parsons and Richard Heck: the Geach–Kaplan sentence (as originally set by Marcus Rossberg).

