

It is possible to create your own symbols by putting together other symbols. Then you can make “definitions” of them in the file, so that if you use the command word you created for them, the whole definition will essentially be placed in the file at that point. I’ve created some definitions for the symbols I use, and I put them at the top of `.tex` document. “Kerning” means moving the next symbol horizontally, so most of these are two letters kerned to print on top of one another (how much to kern was found by trial and error) to make a new symbol.

$\mathbb{Z}$     $\mathbb{R}$     $\mathbb{N}$     $\mathbb{Q}$     $\mathbb{C}$

Notice the one for mod:

$$15 \equiv 3 \text{ mod } 6 .$$

It takes an argument (the modulus), just like some of the other command words like `\sqrt` for square root:

$$\sqrt{121} = 11 .$$

The tilde between mod and #1 is a “tie” — it will show up in the `.pdf` file as a space, but  $\text{\LaTeX}$  will try not to put in a line break there, as it might for a simple space. You can create commands using as many arguments as you like; the one for a matrix takes 2; the first is where to put entries in each column — left, center or right — and the second is the entries, with row entries separated by ampersands and rows separated by double-backslashes.

$$\left( \begin{array}{ccc} x & x + 1 & x + 2 \\ x + 3 & x^2 & 2x \end{array} \right)$$