

Example L^AT_EX Document

Darren Tapp

January 9, 2020

L^AT_EX is a markup language that is intended to produce beautiful mathematics. We can display an equation;

$$x + 3 = 5.$$

or mathematics could be in line as $x = 2$.

`\` usually precedes a command. `$` is also a special symbol that denotes math mode. One dollar sign for $\sum_{i=1}^n i$ if you want the text inline. Two dollar signs if you want to display

$$\frac{\partial \psi}{\partial t}.$$

However I prefer `\[` and `\]` to display equations.

Do you want to define a linear map $L : \mathbb{R}^2 \rightarrow \mathbb{R}^3$? We could let L be an embedding of \mathbb{R}^2 into \mathbb{R}^3 .

$$(x, y) \mapsto (x, y, 0)$$

Note I get tired of typing `\mathbb{R}` so I defined a macro above. I now can type about \mathbb{R} all day long.

For some reason I would like to give an example of a matrix.

$$\begin{bmatrix} 1 & 1 & 0 \\ 0 & 1 & 2 \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} = \begin{bmatrix} 3 \\ 8 \\ 3 \end{bmatrix}.$$

This document uses two packages with the `\usepackage` declaration above. `amssymb` is used for the blackboard bold \mathbb{R} . `amsmath` is used to make the matrices easier to type.