

Mavscript and graphs - using LaTeX and Asymptote

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1 How to create graphs in mavscript-yacas

Mavscript does not support graphs directly, as it is only text based. A convenient work-around is to use a \LaTeX -template for Mavscript.

Generating graphics in \LaTeX is comfortable using *Asymptote*. Asymptote is a powerful vector graphics language for technical drawing.

1.1 How to call mavscript

Convert this Mavscript template to the final output pdf like this:

1. mavscript-yacas example.tex
2. pdflatex out-example.tex
3. asy out-example-*.asy
4. pdflatex out-example.tex

If you have *latexmk* configured (see below) use the following commands.

1. mavscript-yacas example.tex
2. latexmk -pdf out-example.tex

1.1.1 Notes

Working with L^AT_EX, Mavscript's standard control character is the paragraph sign § (§*m*, §*i*, §*o*, §*n*, §*io*). The dollar sign is not used, as in L^AT_EX it stands for the math mode.

Asymptote is included in the T_EX distributions TeX Live and MacTeX.

The short way uses latexmk. It needs a configuration file called latexmkrc in order to support Asymptote. The file is included in the example folder. It can be either copied once to "\$HOME/.latexmkrc" or to the working directory.

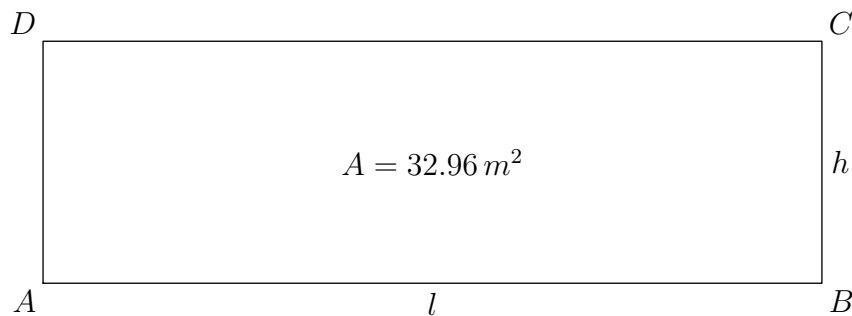
2 Mavscript calculation example

The rectangle measures:

Length $l := 10.3 \text{ m}$

Hight $h := 3.2 \text{ m}$

The area of the rectangle is $A := l \cdot h = 32.96 \text{ m}^2$.



The rectangle is long.