

rim_maxima_test

2024-08-06

Load in packages

```
library(rim)

## Maxima successfully registered as knitr engine!

maxima.start()
sessionInfo()

## R version 4.1.2 (2021-11-01)
## Platform: x86_64-apple-darwin17.0 (64-bit)
## Running under: macOS Big Sur 10.16
##
## Matrix products: default
## BLAS:
## /Library/Frameworks/R.framework/Versions/4.1/Resources/lib/libRblas.0.dylib
## LAPACK:
## /Library/Frameworks/R.framework/Versions/4.1/Resources/lib/libRlapack.dylib
##
## locale:
## [1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8
##
## attached base packages:
## [1] stats      graphics  grDevices  utils      datasets  methods   base
##
## other attached packages:
## [1] rim_0.6.4
##
## loaded via a namespace (and not attached):
## [1] compiler_4.1.2      R6_2.5.1           fastmap_1.1.1
## [4] cli_3.6.2           tools_4.1.2        htmltools_0.5.2
## [7] GlobalOptions_0.1.2 rstudioapi_0.15.0  yaml_2.3.10
## [10] Rcpp_1.0.13         rmarkdown_2.11     knitr_1.48
## [13] xfun_0.46           digest_0.6.34      rlang_1.1.3
## [16] evaluate_0.24.0

maxima.version()

## [1] '5.47.0'

maxima.get('solve(x = y + 1, y);')

## (%o1) [y = x-1]

(%i1) L: sqrt(1 - 1/R^2);
```

```
## (%o1) sqrt(1-1/R^2)
(%i2) assume(R > 0);
## (%o2) [R > 0]
(%i3) 'integrate(x, x, 0, L) = integrate(x, x, 0, L);
## (%o3) 'integrate(x,x,0,sqrt(1-1/R^2)) = (R^2-1)/(2*R^2)
```