`MicroWithR` Cheat Sheet

1. Basic Operators

Operator	Outcome(s)
`<-`, `->`, `=`	Assign: left, right, generic
`!`	Not
`|`, `||`	Or: element-wise, entire list
`&`, `&&`	And: element-wise, entire list
`==`, `<`, `>`	Equal to, less than, greater than
`+`, `-`, `*`, `/`, `^`	Add, subtract, multiply, divide, exponent
`|>`	Pipe code result forward

2. Base R Functions

Function	Outcome(s)
`plot()`, `curve()`	Create a new x-y or function plot
`abline()`	Add line with specified intercept/slope to plot
`lines()`, `segments()`, `arrows()`, `polygon()`	Add line or shape to plot with specified x-y coords
`function()`	Define a math or R function

3. Numerical Solutions Functions

Function [`package::function()`]	Outcome
`nleqslv::nleqslv()`	Solves systems of equations
`Rsolnp::solnp()`	Nonlinear constrained optimization

4. Analytic Solutions Functions

Function [`package::function()`]	Outcome
`Ryacas::ysym()`, `Ryacas::yac_symbol()`	Convert characters/expression to yac_sym object
`Ryacas::yac_str()`	Convert yac_sym object to character string
`Ryacas::as_r()`, `Ryacas::yac_expr()`	Convert yac_sym to R object/expression
`Ryacas::y_rmvars()`	Remove variables (i.e. left-hand side)
`stats::deriv()`, `Deriv::Deriv()`	Take symbolic derivatives (R expression)
`Ryacas::deriv()`	Take symbolic derivatives (yac_sym object)
`base::solve()`	Invert a matrix, solve a numerical linear system
`deriv::Solve()`	Solve string expressions for specified variables
`Ryacas::solve()`	Solve yac_sym equations for specified variables
`Ryacas::with_value()`	Substitute value or yac_sym expression for variable
`Deriv::Simplify()`	Simplify string expressions (works pretty well)
`Ryacas::simplify()`	Simplify yac_sym objects (works less well)
`Ryacas::yac(MaxEvalDepth())`	Set the maximum stack depth