1. R as a Calculator (for Scalars)

Command	Meaning	Example
Arithmetic:		
`x [+-*/^] y`	$x+y, x-y, xy, x/y, x^y$	`7 / 3, 8^(1/3)`
`x %/% y`	integer division	`7 %/% 3`
`x %% y`	modulo (remainder)	`7 %% 3`
Calculator functions:		
`exp()`	exponential	`exp(1)`
`log(x, base = exp(1))`	logarithm	`log(9, base = 3)`
("=" indicates default)		`e = exp(1); log(e^2)`
`cos(), sin(), tan()`	trigonometry	`sin(pi/2)`
`sqrt()`	square root	`sqrt(9)`
Other easy functions:		
`abs(x)`	absolute value	`abs(-3)`
`floor(x)`	greatest int $\leq$ x	`floor(-1.5)`
`ceiling(x)`	smallest int $\geq$ x	`ceiling(-1.5)`
`round(x, digits = 0)`	round to #decimal places	`round(4/3, 2)`
`signif(x, digits = 6)`	round to #significant	`signif(4/3, 2)`
Statistics distributions:		
`dnorm(x, mean = 0, sd = 1)`	$f(x)$	`dnorm(0)      # density`
`pnorm(q, mean = 0, sd = 1)`	$P(X \leq q)$ for $X \sim N(\text{mean, sd})$	`pnorm(-1, 0, 1)  # probability`
`qnorm(p, mean = 0, sd = 1)`	x with $P(X \leq x) = p$	`qnorm(.16, 0, 1) # quantile`
`rnorm(n, mean = 0, sd = 1)`	random from $N(0,1)$	`rnorm(1, 7, .01) # random`
`[dpqr][t,chisq,f,binom]()`	other distributions	`?pt, pt(-2, 100)`
Miscellaneous:		
`?name`	`help("name")`	?pt (help includes Description, Usage, Arguments, Value, Examples)
`??topic`	`help.search("topic")`	`??deviation`
`<-` (or =)	assign variable	`x <- 3` (or x = 3)
`variable.name`	`print(variable.name)`	`x`
`ls()`	list variables	
`rm(list = ls())`	clear all variables	
`list.files()`	list all files	
`#`	comment rest of line	`N <- 3 # number of points`
`quit()`	quit R	
`source(file)`	read code from `file`	`source("quiz1.R")`
`setwd(dir)`	set working directory	`setwd("/Users/jgillett/Desktop/327")`
Shortcuts		Help > Keyboard Shortcuts
...		
↑,↓ (up-, down-arrow)	previous command, next	
`Esc`	interrupt current command	
...		