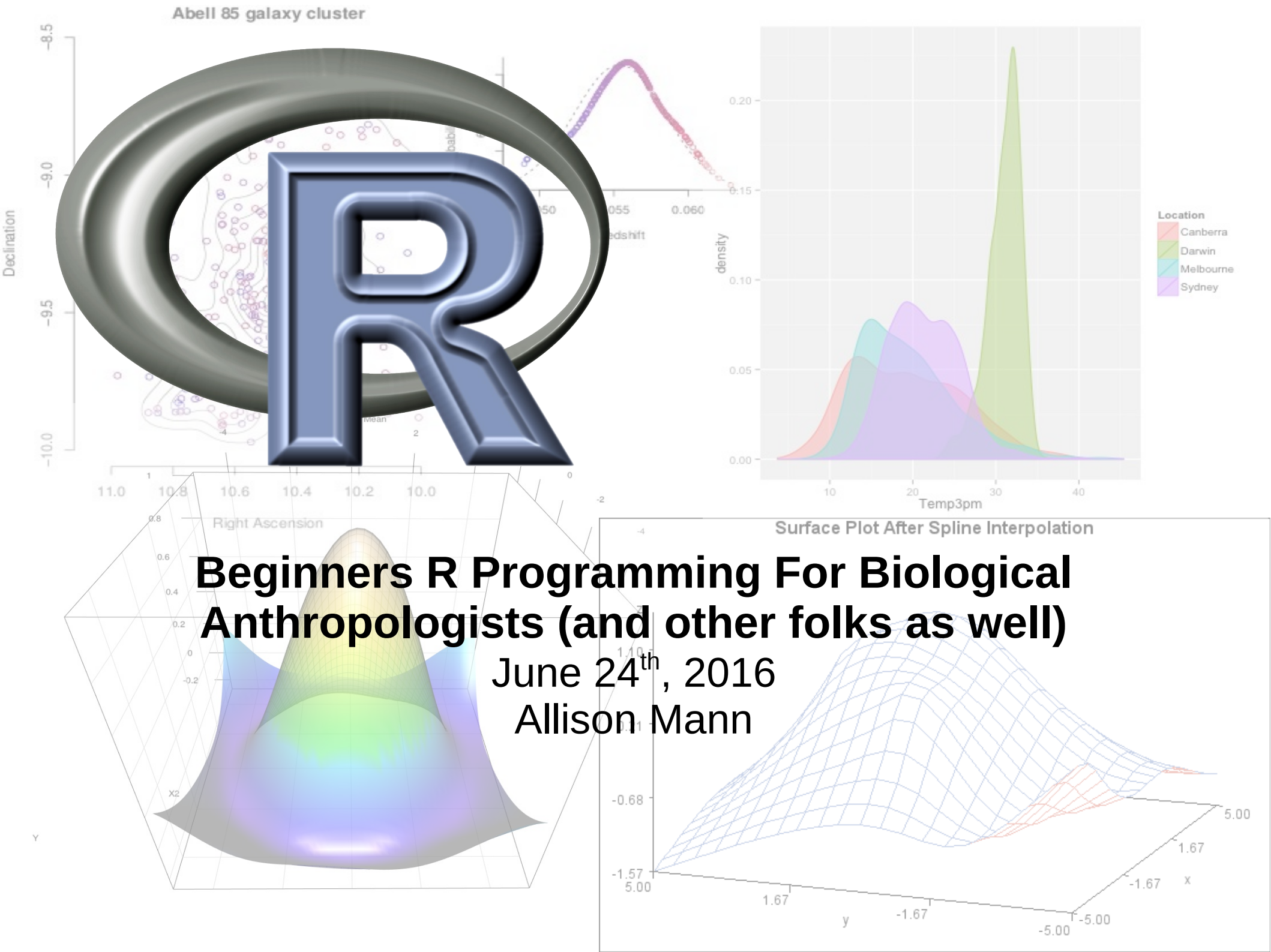
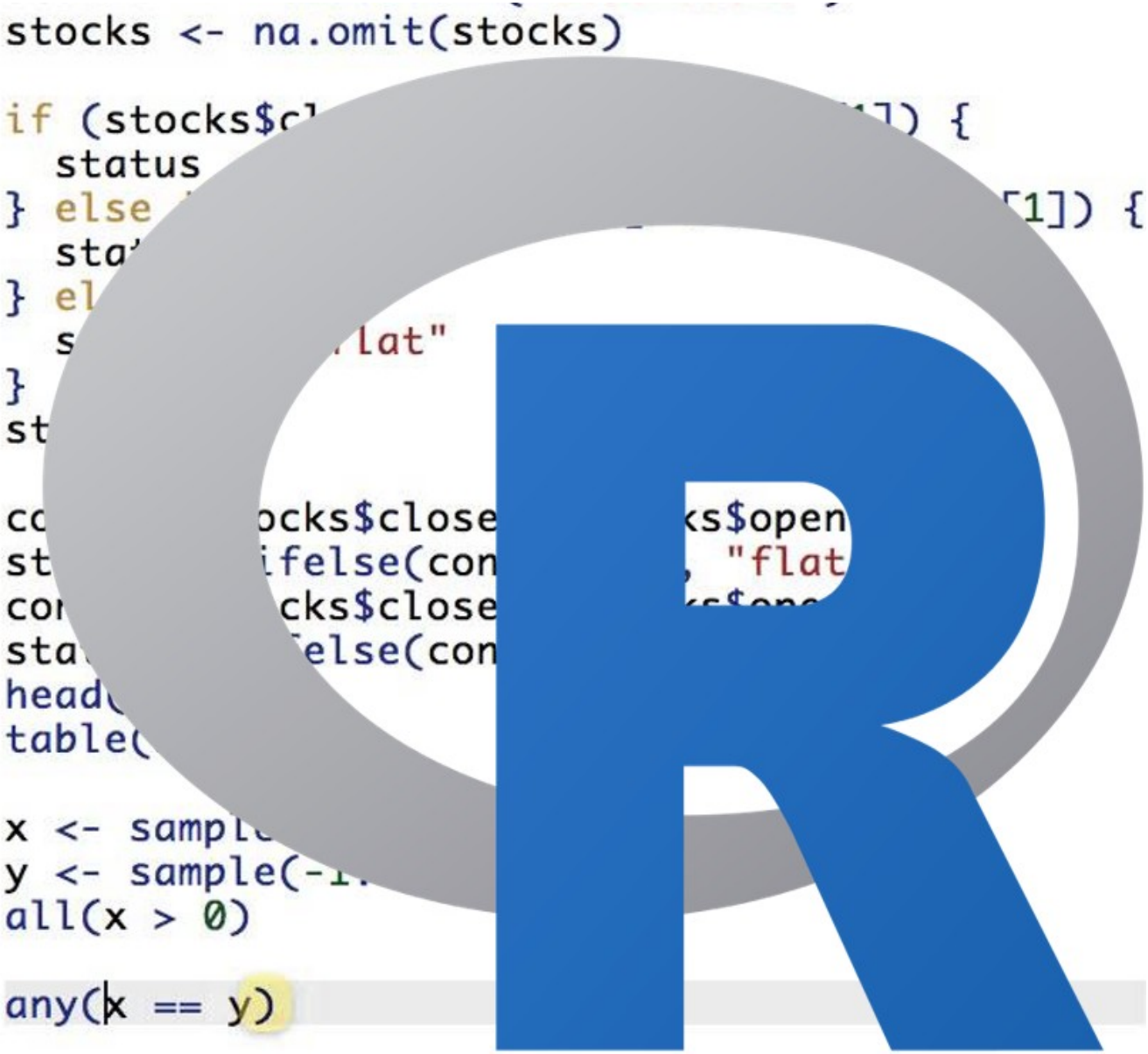


Beginners R Programming For Biological Anthropologists (and other folks as well)

June 24th, 2016

Allison Mann

What is R?


stocks <- na.omit(stocks)
if (stocks$cl
status
} else
sta
} el
s
lat"
}
st
cc
st
co
sta
head(
table(
x <- sampl
y <- sample(-1
all(x > 0)
any(x == y)
ocks$close
ifelse(con
cks$close
else(con
ks$open
"flat
R

What is R?

Suite of statistical/graphics packages

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Object oriented

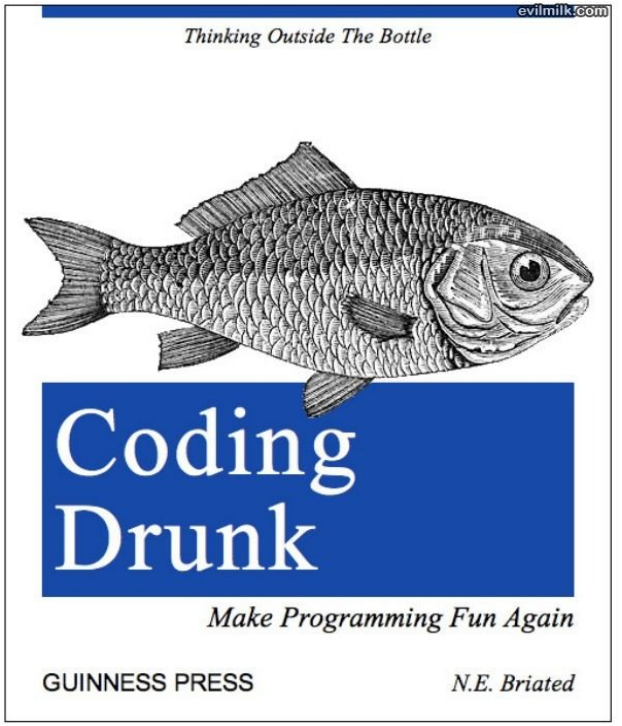
What is R?

Suite of statistical/graphics packages

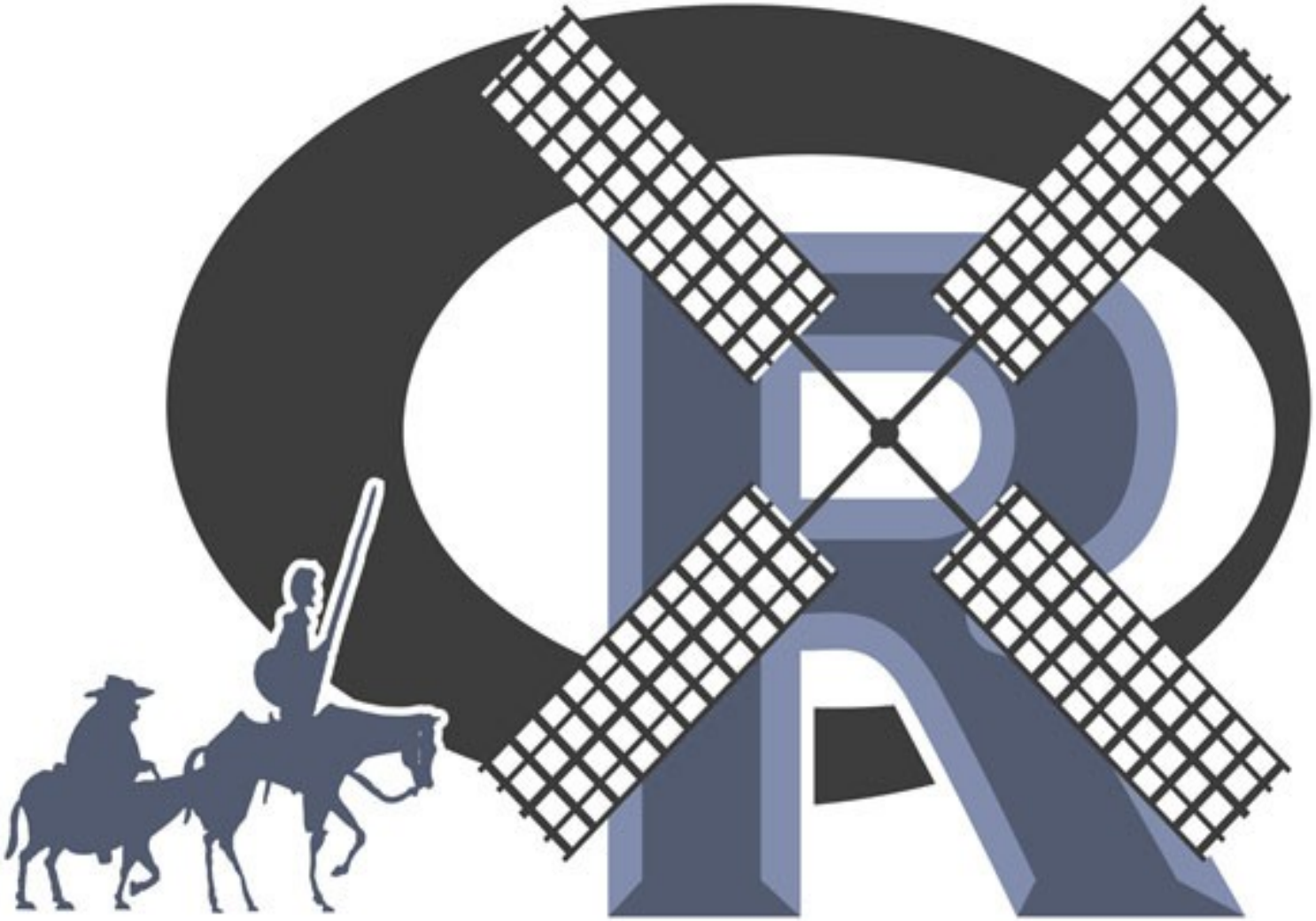
Object oriented

Steep learning curve for the uninitiated

Advice on how to avoid breaking your computer



Why R?



Why use R?

Free!!

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Flexible and open-source

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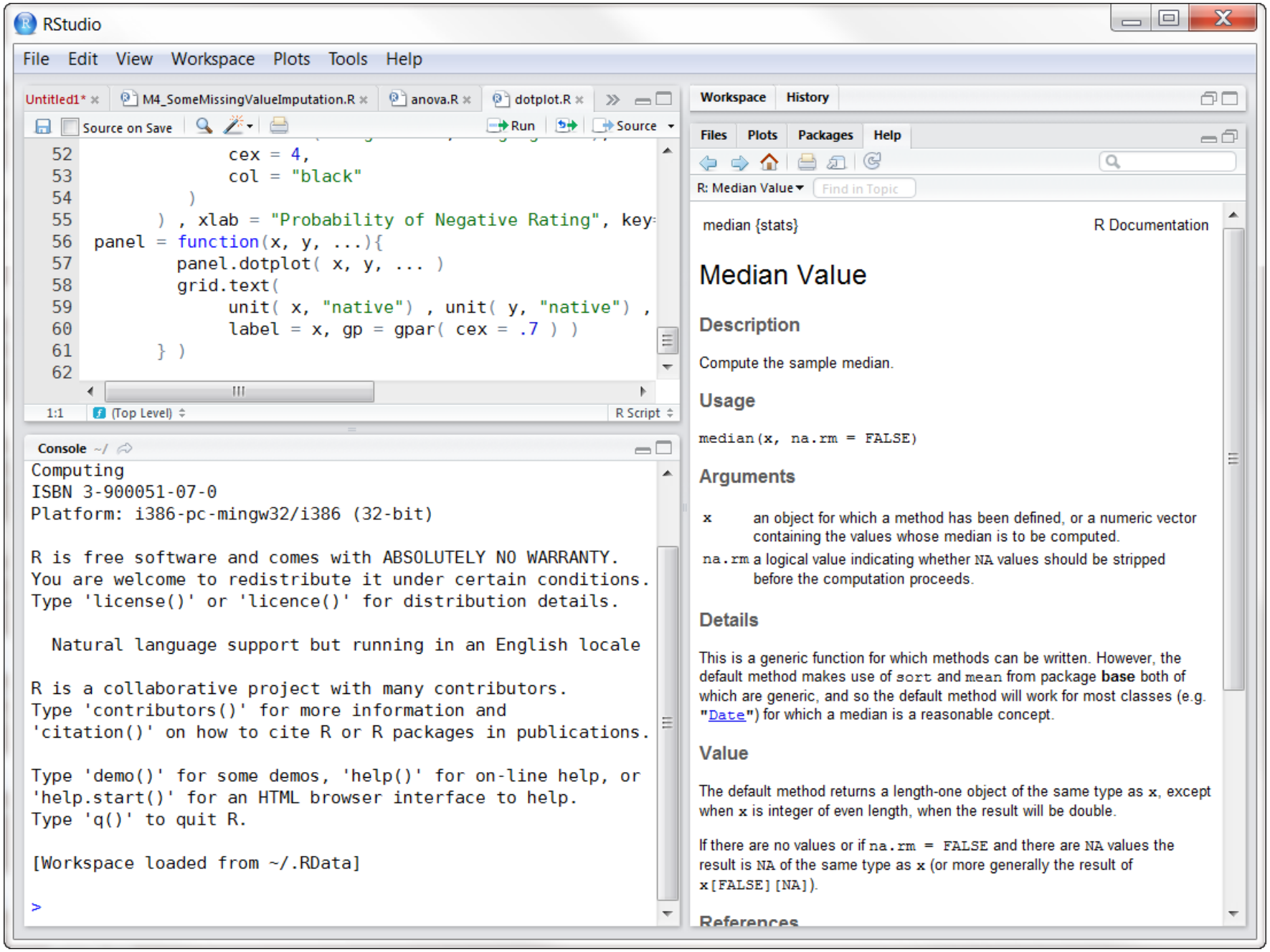
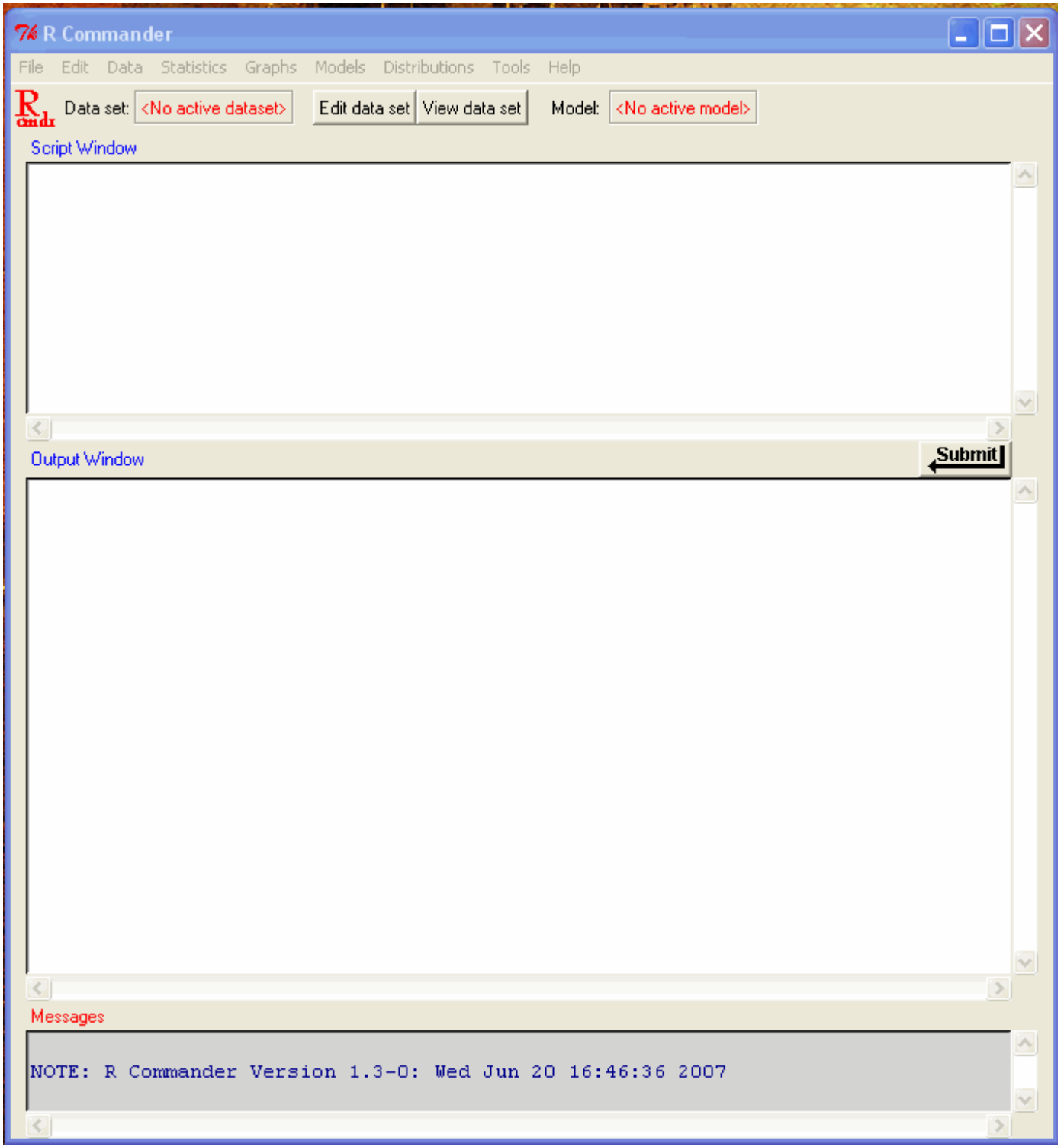
Free!!

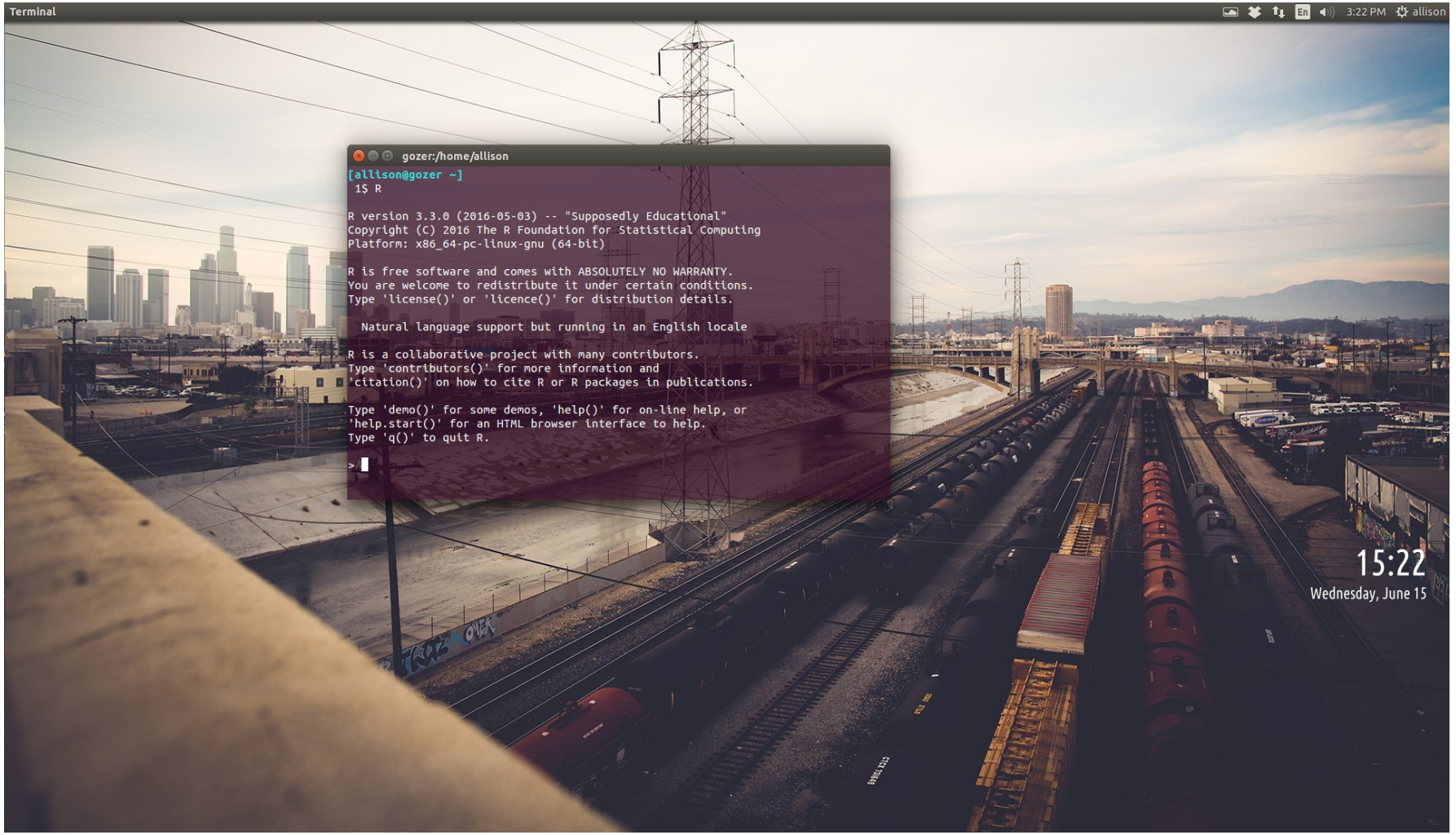
Flexible and open-source

Active and supportive community

Running R → Lots of options


RStudio
File Edit View Workspace Plots Tools Help
Untitled1* M4_SomeMissingValueImputation.R anova.R dotplot.R
Source on Save Run Source
52 cex = 4,
53 col = "black"
54)
55) , xlab = "Probability of Negative Rating", key
56 panel = function(x, y, ...){
57 panel.dotplot(x, y, ...)
58 grid.text(
59 unit(x, "native") , unit(y, "native") ,
60 label = x, gp = gpar(cex = .7))
61 })
62
1:1 (Top Level) R Script
Console ~/
Computing
ISBN 3-900051-07-0
Platform: i386-pc-mingw32/i386 (32-bit)
R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.
Natural language support but running in an English locale
R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.
Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.
[Workspace loaded from ~/.RData]
>
Workspace History
Files Plots Packages Help
R: Median Value
Find in Topic
median {stats} R Documentation
Median Value
Description
Compute the sample median.
Usage
median(x, na.rm = FALSE)
Arguments
x an object for which a method has been defined, or a numeric vector containing the values whose median is to be computed.
na.rm a logical value indicating whether NA values should be stripped before the computation proceeds.
Details
This is a generic function for which methods can be written. However, the default method makes use of sort and mean from package base both of which are generic, and so the default method will work for most classes (e.g. "Date") for which a median is a reasonable concept.
Value
The default method returns a length-one object of the same type as x, except when x is integer of even length, when the result will be double.
If there are no values or if na.rm = FALSE and there are NA values the result is NA of the same type as x (or more generally the result of x[FALSE][NA]).
References


R Commander
File Edit Data Statistics Graphs Models Distributions Tools Help
Data set: <No active dataset>
Edit data set
View data set
Model: <No active model>
Script Window
Output Window
Submit
Messages
NOTE: R Commander Version 1.3-0: Wed Jun 20 16:46:36 2007


Terminal
En
3:22 PM
allison
gozer:/home/allison
[allison@gozer ~]
1$ R
R version 3.3.0 (2016-05-03) -- "Supposedly Educational"
Copyright (C) 2016 The R Foundation for Statistical Computing
Platform: x86_64-pc-linux-gnu (64-bit)
R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
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>
15:22
Wednesday, June 15

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  - e.g.: 1.0, 345.689, 4.21

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- ***List*** → single dimension of information of different types

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- ***Data Frame*** → multidimensional collection of different type objects
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- ***Factor*** → categorical class

General Operators

<- or ->	#assignment operator
~	#relationship between objects
:	#sequence operator
$	#component operator
“ ” or ' '	#string operator
#	#comment

General Math Operators

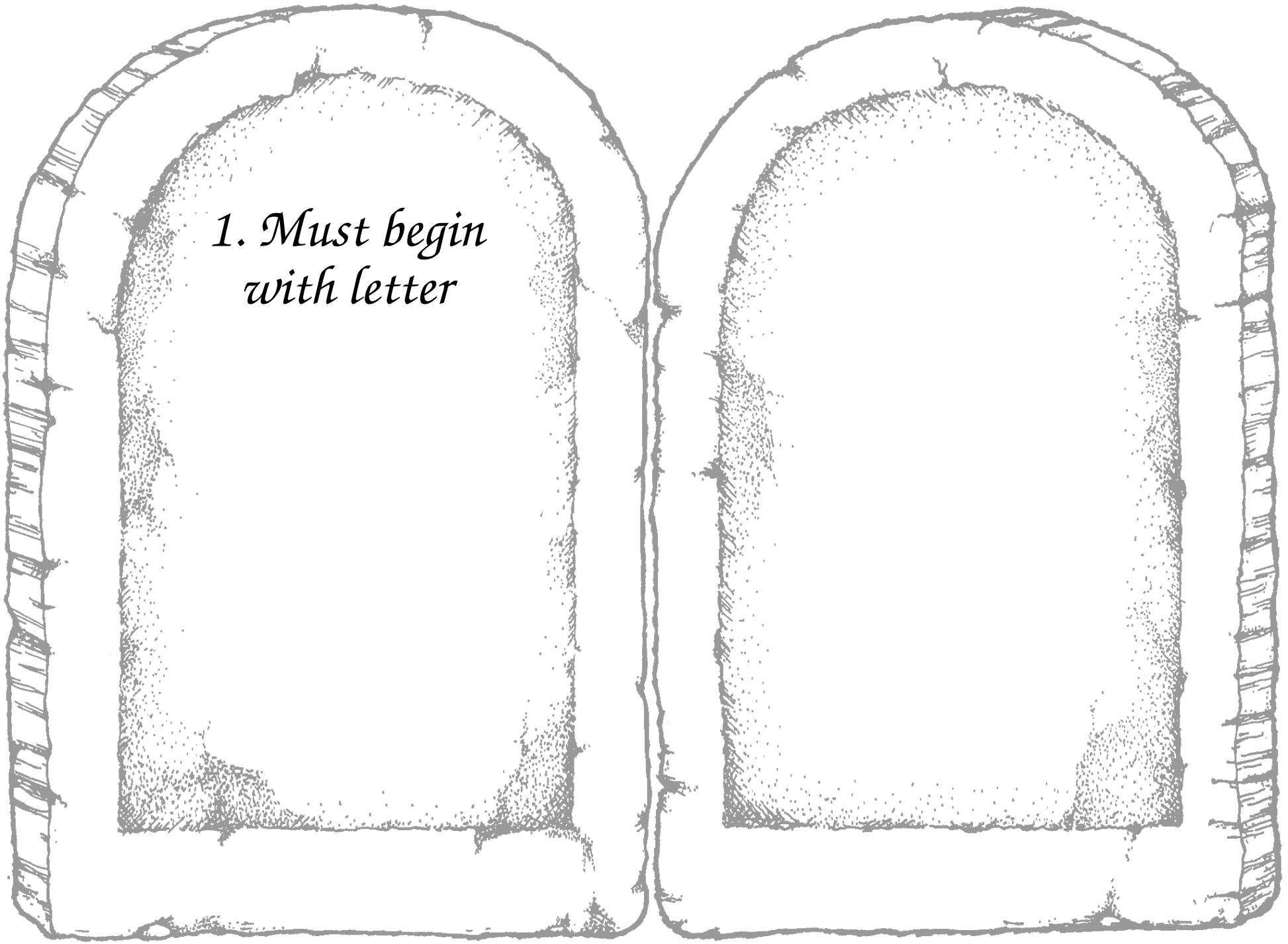
+	#addition
-	#subtraction
*	#multiplication
/	#division
^	#exponent
%%	#modulus

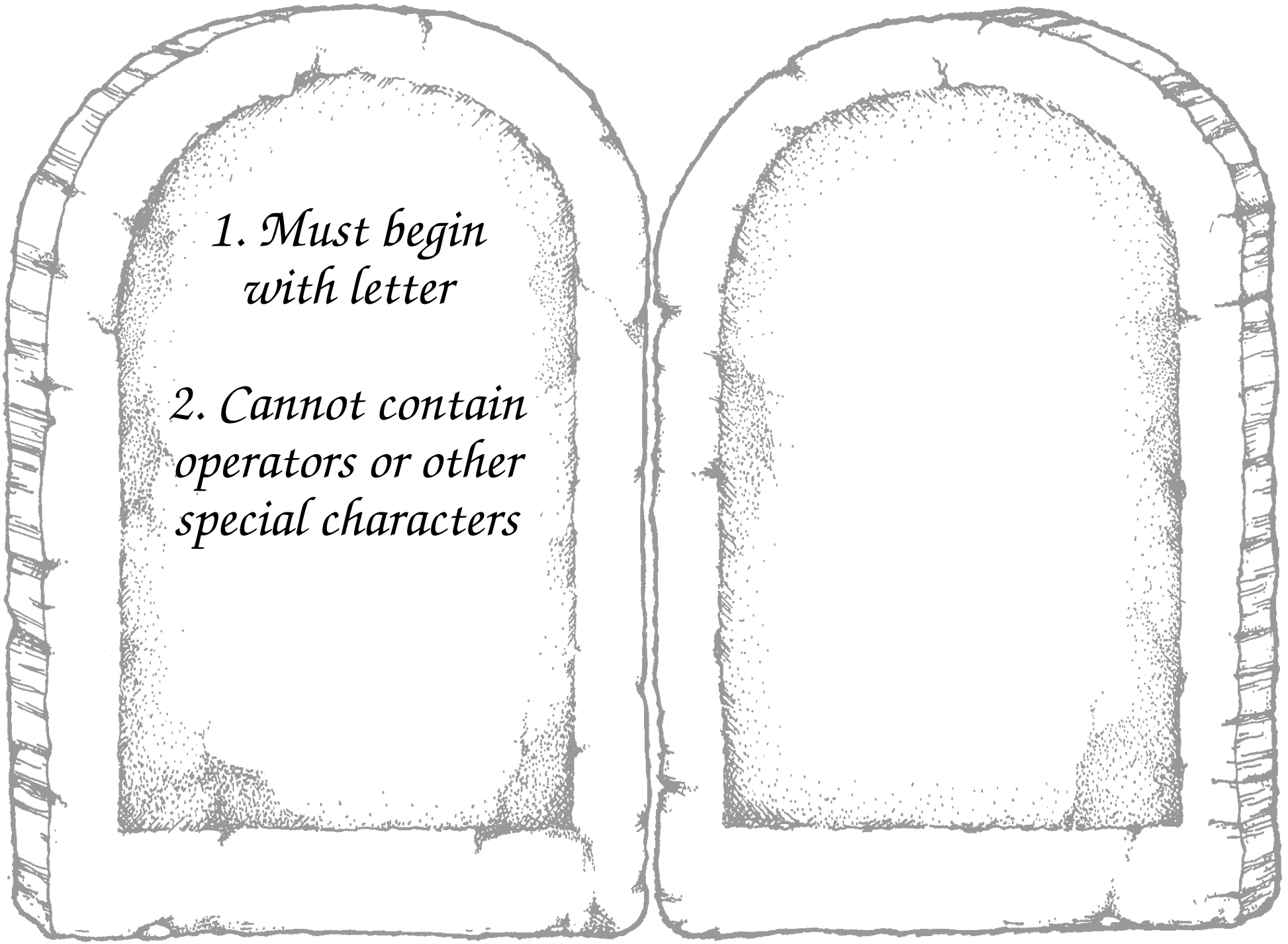
Comparison Operators

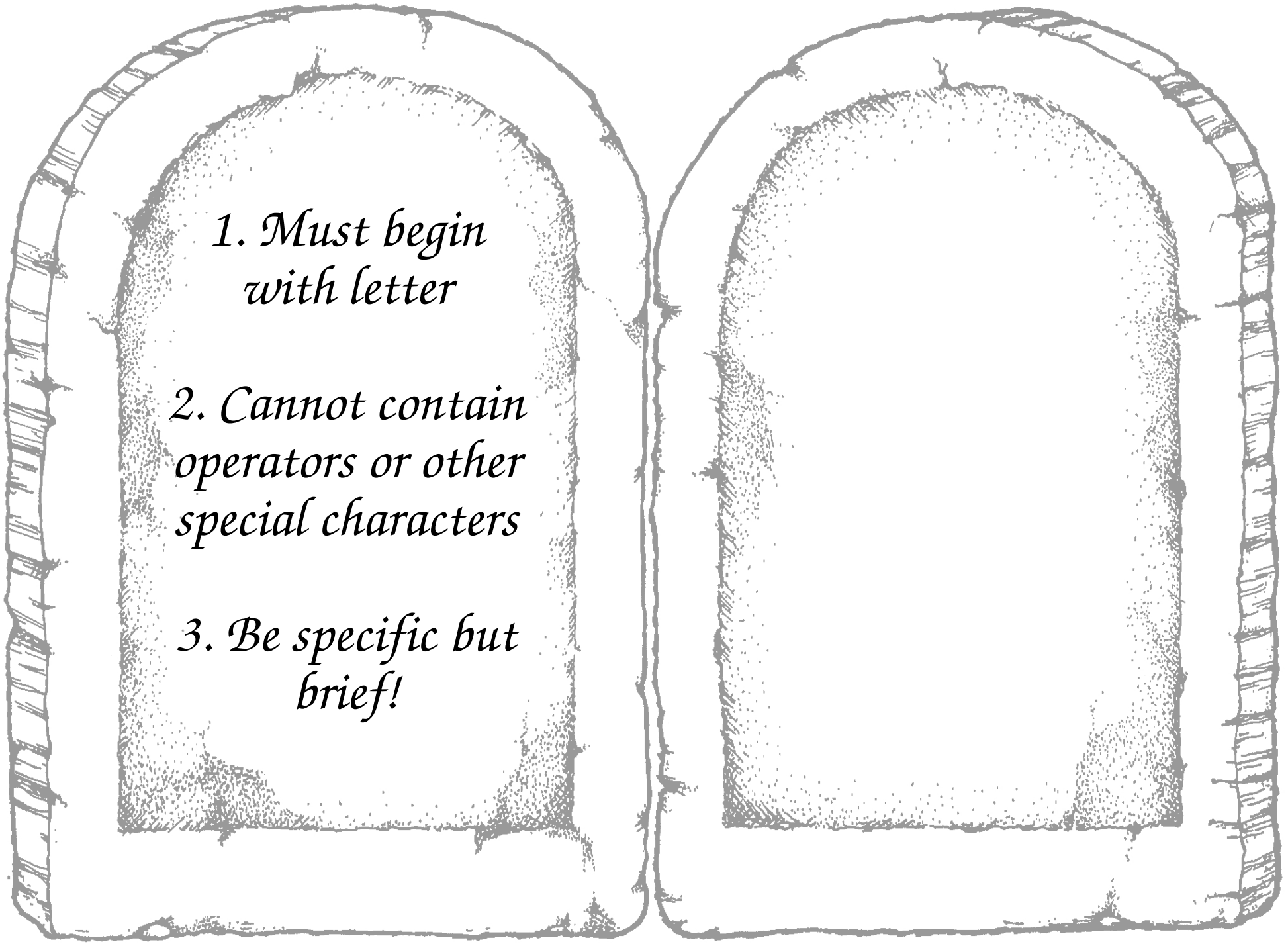
<	#less than
>	#greater than
>=	#greater than or equal to
<=	#less than or equal to
==	#equals
!=	#does not equal

Boolean (True/False) Operators

!	#not
&	#and
&&	#and if
|	#or
||	#or if


1. Must begin
with letter


1. Must begin with letter
2. Cannot contain operators or other special characters


1. Must begin with letter
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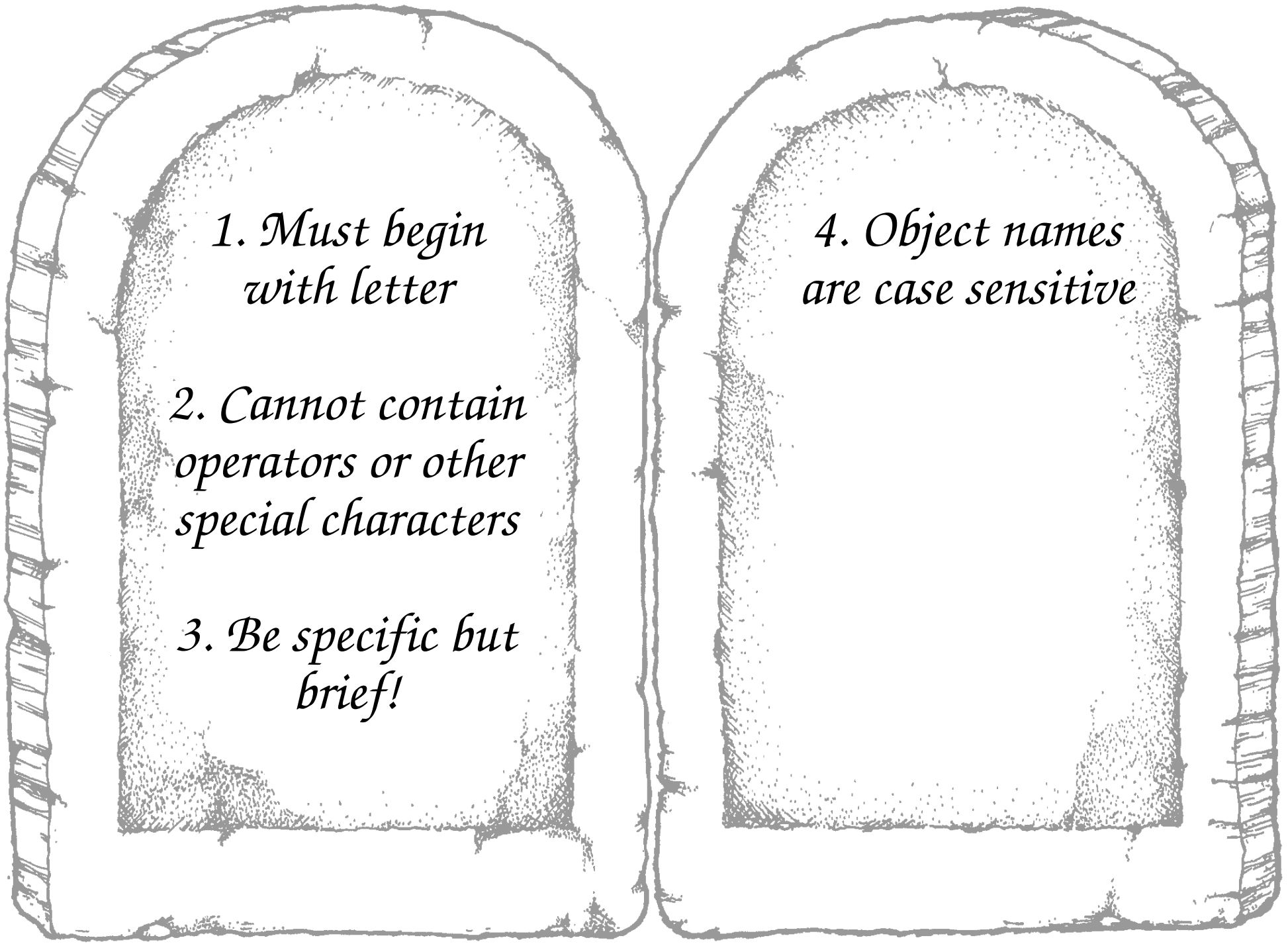
3. Be specific but brief!


1. Must begin with letter
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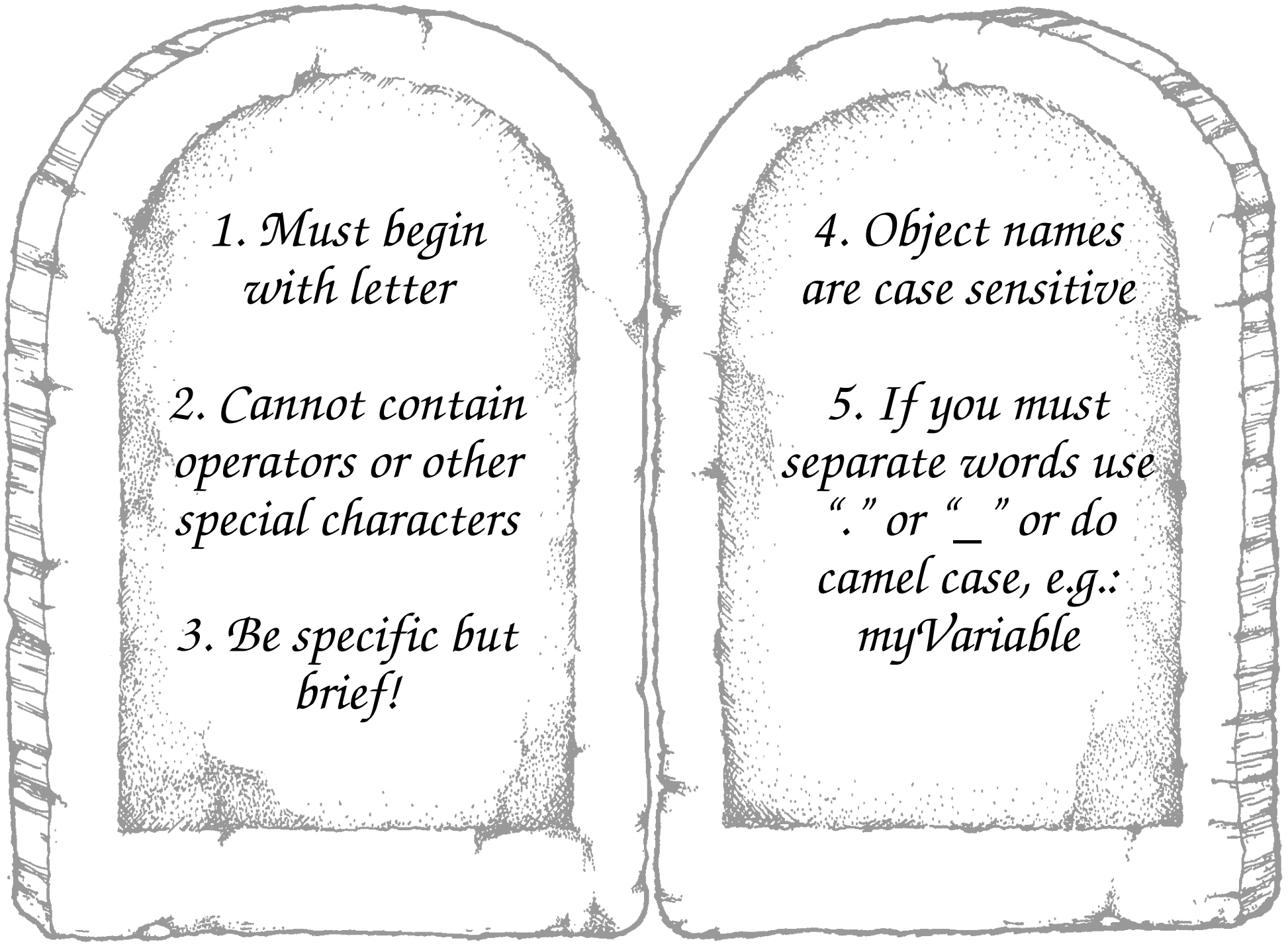
1. Must begin with letter
2. Cannot contain operators or other special characters
3. Be specific but brief!
4. Object names are case sensitive
5. If you must separate words use "." or "_" or do camel case, e.g.: myVariable