Scilab Quick Reference

```
+ addition                              abs absolute value
- subtraction                           sqrt square root
.* multiplication                       exp e^
./ division                             log natural log or ln
^ to-the-power-of                       log10 usual log (opposite of 10^)
e times-10-to-the (2e4 = 2 .* 10^4)     sin sine
d same as "e" but double precision      cos cosine
```

startup:
1) go to file menu and change current directory to wherever you normally keep scilab files
2) select SciNotes (a.k.a. Editor) under Applications menu; paste all good/successful commands and comments/output into this window; F5 saves & executes, or save using the commands in File menu

```
//
```
comment
```
;
```
put after command to suppress output to console

```
data=read('testdata.in',-1,2) reads all rows of 2-column file into "data"
x=data(:,1);                   puts all rows, column 1 of data into x
```

```
y=10:-1:1
```
example use of colon operator (would yield array y = [10 9 8 7 6 5 4 3 2 1])
```
size()
```
dimensions of array in parentheses
```
sum()
```
sum of array in parentheses

```
find
```
uses true/false logic to identify a subset of the data meeting
specific conditions, with logical operators as follows:
```
<   LESS THAN
>   GREATER THAN
==  EQUAL
~=  NOT EQUAL
&   AND
```
(yields true if both A and B are true)
```
|   OR
```
(yields true if either A OR B is true, or if both are true)
```
to get the opposite of B, type (1-B) – this is "NOT"
```

```
clf();
```
clears graphic window
```
scf(#);
```
switches to/creates graphic window number #

```
plot(x,y,'b.',"MarkerSize",1)
```
creates plot of y vs. x with blue points of size 1 (e.g., 'r*' would give red stars)
```
zoom_rect([x0,y0,x1,y1])
```
specify plot range on x and y axes

```
histplot(classes, data, normalization=%f,style=#,rect=[x0,y0,x1,y1])
```
creates histogram of "data" with bin boundaries defined by "classes", color set by style #, normalization turned off, and plot boundaries from (x0,y0) to (x1,y1)
e.g. `classes=-15:0.1:15` would make bins in increments of 0.1 from -15 to 15

```
xtitle('Jane Doe Today's Date','great x-axis title','great y-axis title')
```

To export plots to pdf, choose File menu "Export to" and change "Files of type" to "PDF image"

When in doubt, reboot scilab!