

# Script for videos \*

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December 6, 2016

\* Currently: position Keyboard Viewer to bottom-right of Matlab Window; position Octave and browser windows accordingly; use Monosnap (free); then “Record Video”; resize area; medium quality; move self to top-left; by default saves to Picture/Monosnap folder.

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# 1 Vectors

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## 1.1 Use Matlab/Octave for vector computation

`startQuit` : To start Matlab, find on your computer or web service the icon for Matlab which on my computer is over [here](#). Click and Matlab will start. Starting takes five seconds or so, and while it starts up this classic image is displayed. Eventually this Matlab window appears and is usually divided into five panes that you see [here](#). We will only use the middle pane. In the lower right corner I also show this keyboard to help show the keys I type. In the middle pane we later do some exciting calculations, but for now let's just test by typing `1+1` followed by the enter/return key. Matlab tells us the answer 2. To finish the session with Matlab, just type `quit` followed by the enter/return key.

Alternatively, to use Octave, find on your computer or web service the icon for Octave which on my computer is over [here](#). Click and Octave will start in a window like this. Let's make this

window bigger so you can see it more clearly. In the lower right corner I also show this keyboard to help show the keys I type. Later we do some exciting calculations with Octave, but for now let's just test by typing  $2*3/5$  followed by the enter/return key. Octave tells us the answer 1.200. To finish the session with Octave, just type `quit` followed by the enter/return key.

Lastly, software such as Matlab and Octave may be executed online. For example, visit [octave-online.net](http://octave-online.net) in any browser and a nice coloured window appears. Close the welcome messages. Then type your commands at the prompt. For example, compute the golden ratio, via the square-root function, with  $(1+\text{sqrt}(5))/2$ , followed by Return/Enter, and octave-online shows the answer 1.6180. To finish, type `quit`, Return/Enter, and close the window.

This finishes three examples of how to start and quit Matlab/Octave.

`vecLength :`

`vecAlgCheck :`

`vecAddSubMult :`

`vecDotAngle :`

vecDotDistr :

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## 2 Systems of linear equations

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lineqn3x3 :

lineqn5x5 :

lineqn3x2 :