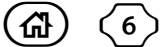
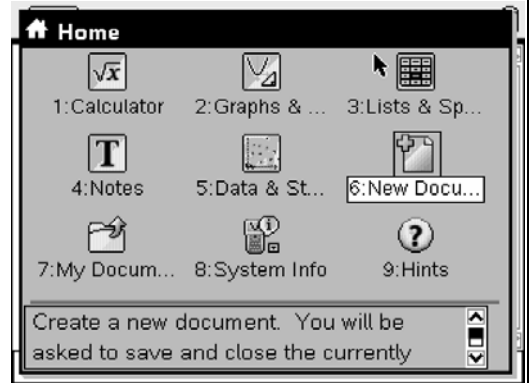


Basic Vectors

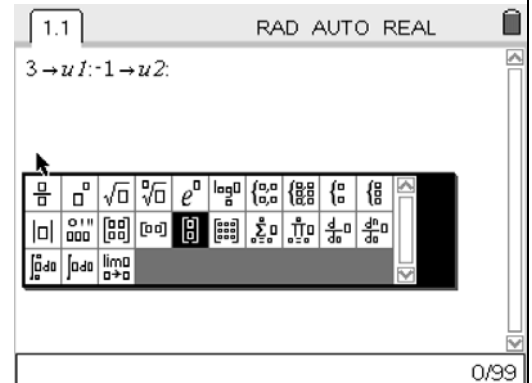
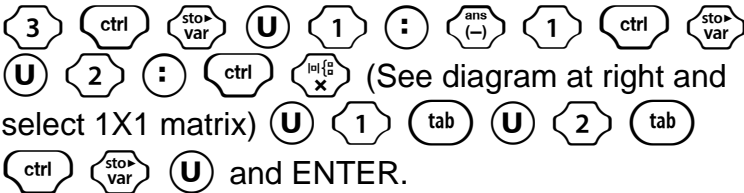
Open a New Document.



Choose Calculator

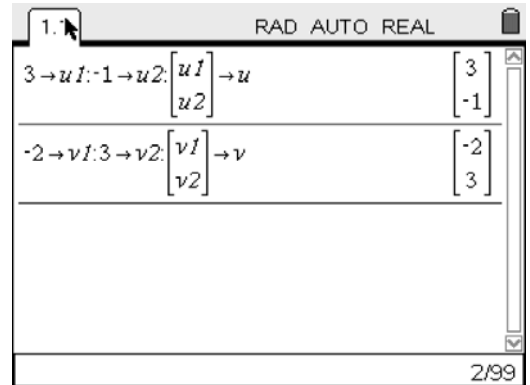


Enter the vector $\vec{u} = \langle 3, -1 \rangle$



On the next line repeat the process for the vector $\vec{v} = \langle -2, 3 \rangle$

The two vectors have been entered in the diagram at the right.



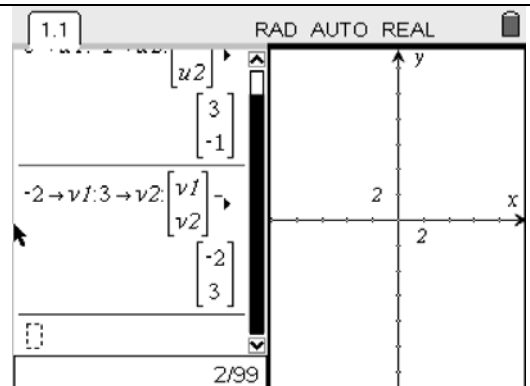
Split the screen.



Change sides of split screen: ctrl tab

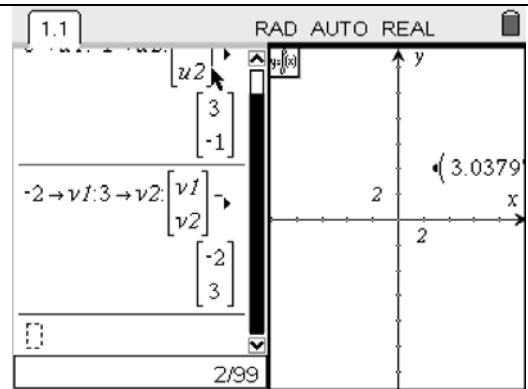
Choose Graphing Application: menu 2

Hide the Function Line: ctrl G



Add a point: (menu) 6 1

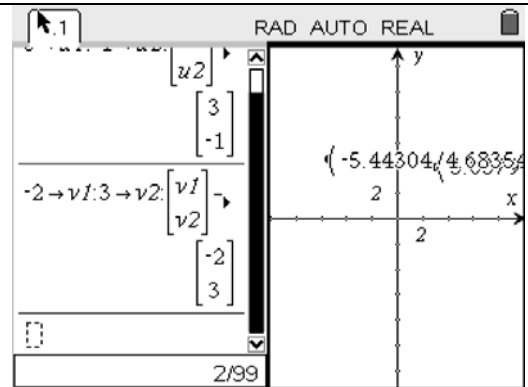
Find the coordinates: (menu) 1 7 Push ENTER twice to drop the coordinates.



Repeat the above to add the second point and find its coordinates.

Don't be concerned with the values.

Push (esc)



At this point, it would be a good suggestion to save this document into an appropriate folder with an appropriate name. Saving a document is done as follows:

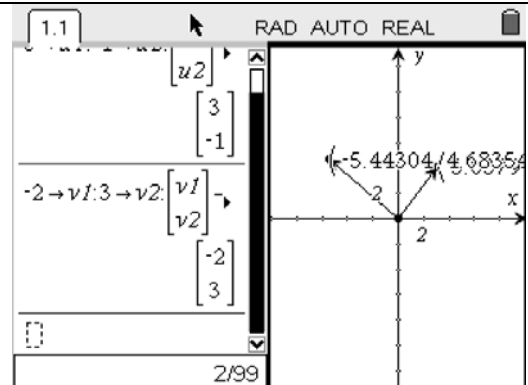
(ctrl) (home) 4 1

Once a document is initially named and saved it can be saved by (ctrl) (S)


Draw the vectors with the initial point at the origin and the terminal point at the points added in the last two steps.


(menu) 6 8

Choose the initial point, (arrow with dot), ending point, (arrow with dot).

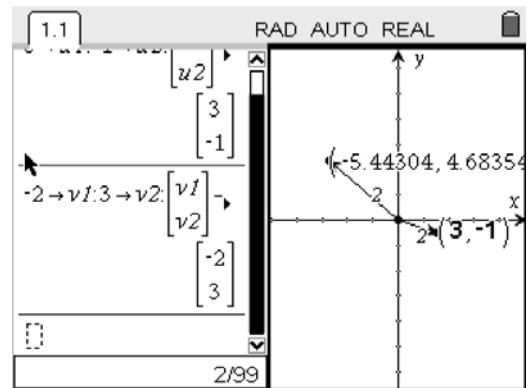
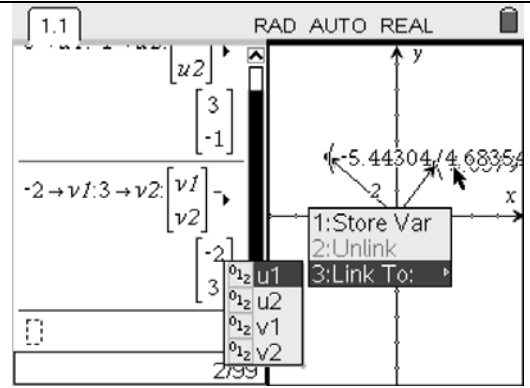


Link the coordinates of the points with the variables $\langle u1, u2 \rangle$

Place the cursor over the x-coordinate:  **3**
 Choose u1 and ENTER.

Place the cursor over the y-coordinate:  **3**
 Choose u2 and ENTER.

The values will turn **BOLD**. See diagram at the right.



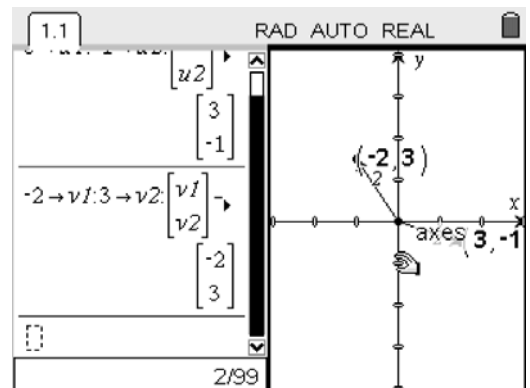
Repeat the process for the second vector.



Assign v1 to the x-coordinate and v2 to the y-coordinate.

The diagram at the right shows both vectors.

$$\vec{u} = \langle 3, -1 \rangle \text{ and } \vec{v} = \langle -2, 3 \rangle.$$

Grab the either axes on a "tick" mark and adjust the viewing screen.



Change the side of the split screen   and change the values of the vectors.