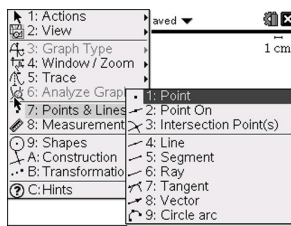


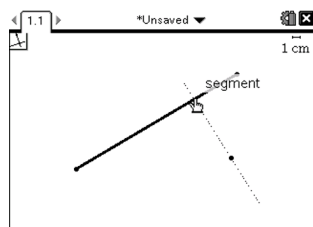
# Geometry Concepts with TI Nspire

## Creating a Point

- Create a new page and choose “3: Add Geometry”
- Press **(menu)** and then choose “7: Points & Lines”
- Choose “1: Point”.
- If you want to plot a point on a line choose “2: Point On”.
- Be sure to label the point immediately after plotting it. Simply type the label you want for the point and then hit **(esc)**.



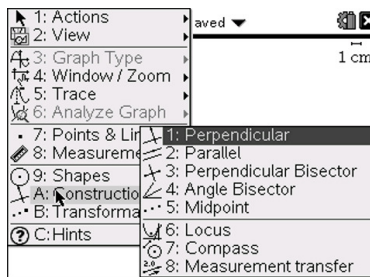
Points & Lines Menu



Constructing a Perpendicular Line

## Drawing a Line

- To draw a line, segment, or ray, press **(menu)** and choose “7: Points & Lines”.
- Choose between 4, 5, 6, depending on what type of line you want to create.
- Move the cursor to where you want the line to begin and hit enter. Don't forget to label the point.
- Move the cursor to extend the line in the direction you want and press enter. Don't forget to label the point.
- The cursor will remain in line mode until you've pressed **(esc)**.

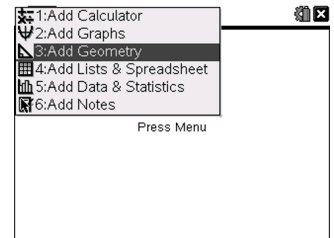


Constructions Menu

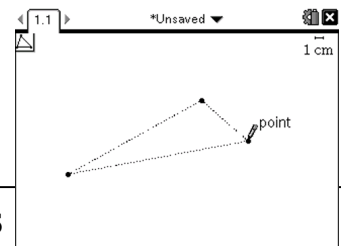
## Measuring Tools

The Geometry Page has the capability of measuring the lengths of lines, angle measures, and area of closed shapes.

- To make a measurement, press **(menu)** and then “8: Measurement”.
- To measure a line, choose “1: Length” and then move your cursor over the line you want to measure. Click to make the measurement appear on the page.
- To measure an angle, click on one endpoint, the vertex, and then the other endpoint.
- To measure the area of a shape, move the cursor to the side of the shape and then click.



Measurement Menu



Creating a Triangle

## Creating Shapes

Creating shapes on TI Nspire is as simple as clicking.

- To create a shape, press **(menu)** and then choose “9: Shapes”.
- Choose the shape that you want to create.
- Move the cursor to where you want to begin your shape and then click.

- Move the cursor to the next point and click.
- Continue until the shape is complete.
- To finish a polygon, double click on the last point.
- Be sure to label the points as you go.

## Constructions

### Parallel Line

You can construct parallel lines using the Constructions Menu.

- First create a line or segment.
- Then press **(menu)** and choose “9: Constructions”.
- Choose “2: Parallel”. Plot a point that you want the parallel line to pass through and then click on the line or segment you previous created. The parallel line will appear on the page.

### Perpendicular Line

You can construct perpendicular lines using the Constructions Menu.

- First create a line or segment.
- Then press **(menu)** and choose “9: Constructions”.
- Choose “1: Perpendicular”. Plot a point that you want the perpendicular line to pass through and then click on the line or segment you previous created.

### Perpendicular Bisector

- Create a segment.
- Press **(menu)** and choose “9: Constructions”.
- Choose “3: Perpendicular Bisector”.
- Double click on the segment you want to bisect.

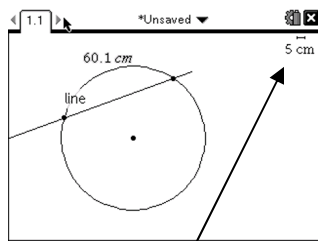
### Angle Bisector

- Create an angle
- Press **(menu)** and choose “9: Constructions.”
- Choose “4: Angle Bisector”.
- Click on one endpoint, the vertex, and then the other endpoint.
- Double click on the last endpoint.

# More Geometry Concepts with TI Nspire

## Changing Scale

- You can change the scale of the geometry page.
- Move your cursor over the scale and click.
- Delete the current scale and replace it with the scale that you want.



Geometry Page Scale

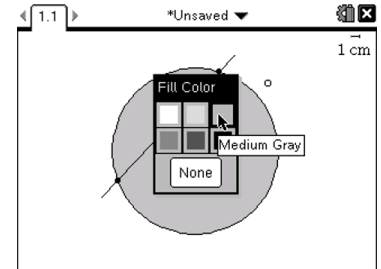
## Changing Attributes

- You can change the attributes of different objects in the geometry page.
- Move the cursor over the object you want to change. Be sure that the text for the object you want is displayed.
- Press **ctrl** **menu** and choose "3: Attributes".

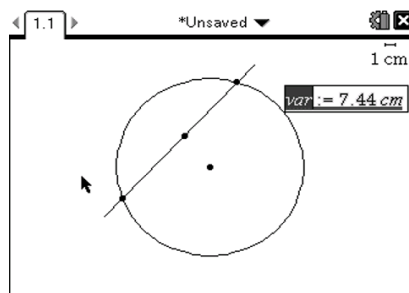
## Changing Color

The TI Nspire has the ability for you to change the color of your lines or shapes.

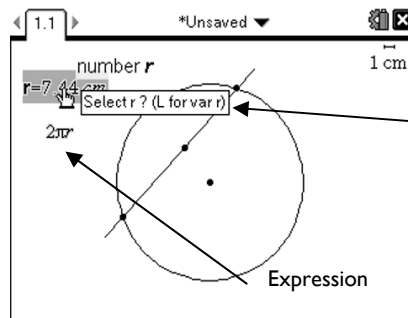
- To change the color, press **ctrl** **menu**.
- Choose "B: Color". You can choose between Line color and Fill color.
- The colors vary based on shades. Choose the shade you want and click.



Changing Fill Color for Circle



Store Function for Measurements



Variable to choose for expression

Calculations Using Stored Variables

## Storing & Using Measurements

You can store your measurements as different variables.

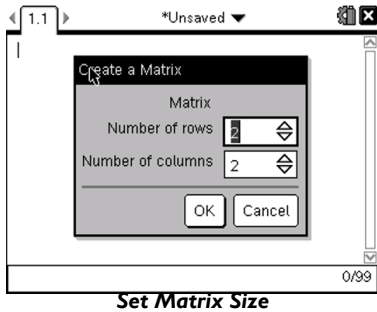
- Choose a line segment to measure.
- Measure the length of the segment.
- The measurement will appear on the page. Move your cursor to where you want the measurement to be placed and click.
- Press **ctrl** **menu** on the measurement and choose "5: Store".
- Replace *var* with the variable you want.

- Hit enter. The variable will appear next to the measurement.
- To use the variables as part of an equation, first type the expression in the geometry page by creating a text box.
- Move your cursor over the text box and press **ctrl** **menu**.
- Choose calculate and then click on the variable you want in your expression.

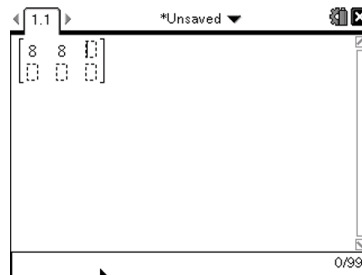
# Matrices with TI Nspire

## Creating a New Matrix

- Create a new calculator page.
- Press **(menu)** and choose “7: Matrices & Vectors”.
- Choose “1: Create”. Then choose the type of matrix you want to create.
- For this activity, choose “1: Matrix”.
- Set the number of rows and columns for your matrix.
- Fill in the matrix by typing the number and then pressing **(tab)** to get to the next entry.



Set Matrix Size

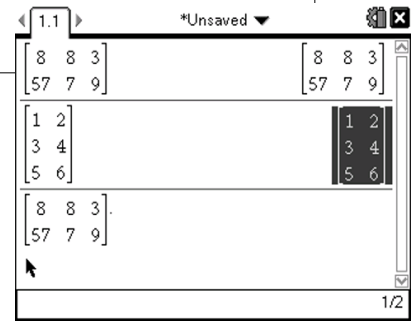


Filling in Matrix

## Performing Matrix Operations

Nspire is slightly different from earlier models when adding, subtracting, or multiplying matrices.

- To add/sub/mult matrices, use the directional arrows to select the matrix you want to first.
- Press the operation button you want.
- Then use the directional arrows to select the second matrix.
- Press **(enter)** to perform the operation.



Multiplying Matrices

## Other Matrix Menu Options

The TI Nspire can perform all of the necessary matrix operations in one quick step.

- Press **(menu)** and choose “7: Matrix & Vectors”. Choose the matrix operation that you need.
- Then choose the matrix that you want to perform the operation on.

