**Approximate Total Time: 25 minutes**
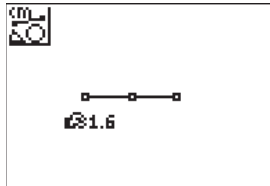
# Midpoint of a Segment

## ACTIVITY OVERVIEW:

### In this activity we will

- Draw a segment
- Find the midpoint
- Measure the segment and each half
- Change the length

This activity allows us to review the basic geometry definitions of *segment* and *midpoint,* while learning to use drawing and measurement tools. We can then explore changes in measurements as we alter the figure.
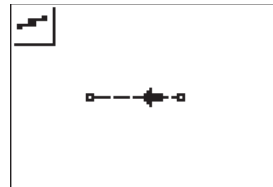
**NCTM Geometry Standard:** Analyze characteristics and properties of 2- and 3-dimensional geometric shapes and develop mathematical arguments about geometric relationships.
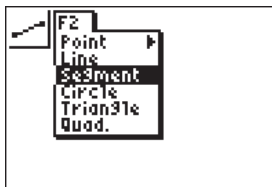
**1**

Press APPS. Move down to the CabriJr APP and press ENTER. Press ENTER, or any key, to begin using the application.

Press Y= for the F1 menu and select **New**. (If asked to **Save changes?** press ◀ ENTER to choose "No.")

**2**
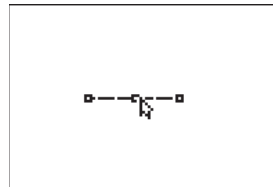
Press WINDOW for the F2 menu. Move to **Segment** and press ENTER to activate the segment drawing tool.

**3**

Move the pencil to the desired location of one endpoint and press ENTER. Move to the other endpoint of the segment and press ENTER.

Press CLEAR to exit the Segment drawing tool.

**4**

Move the cursor until the segment is dashed and flashing then press ZOOM for F3 and move down to **Midpoint** and press ENTER.

**5**

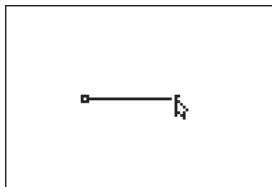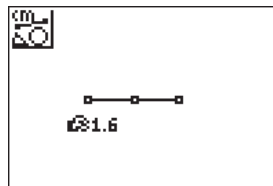Press ENTER again to mark the midpoint.

Press CLEAR to exit the Midpoint drawing tool.
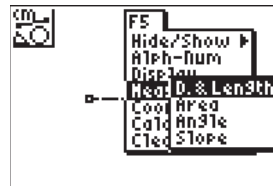
**6**

Press GRAPH for F5 and move down to **Measure** and right to **D. & Length**. Press ENTER.

**7**
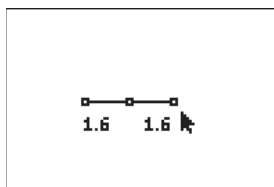
Move until the midpoint is flashing then press ENTER.

Move the pencil to an endpoint, and when it is also flashing, press ENTER. The distance from the midpoint to the endpoint is displayed. The *hand* indicates that the measurement can be moved. Use the arrow keys to move it to a convenient location, and then press CLEAR to turn off the *hand*.
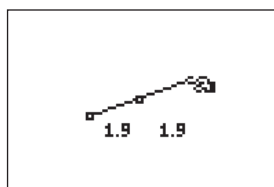
# Midpoint of a Segment

**8**

The measurement tool is still active so return the pencil until the midpoint is flashing. Press ENTER then move until the other endpoint flashes and press ENTER. Move the measurement to a convenient location away from the segment. Press CLEAR to turn off the *hand* and CLEAR to exit the measurement tool.

**9**

Use the arrow keys to move until one endpoint is flashing, press ALPHA to activate the *hand*. Use ▲▼◄► to change the location of the endpoint of the segment. Since the midpoint has been marked, the measurements will change as the segment changes.

### For TI-Navigator™ Users

Use Screen Capture to observe and assess individual progress in drawing and exploring. For help, see page 56.

**10**

To exit the APP, press Y= for the F1 menu. Move to **Quit**, then press ENTER. (Or you can press 2nd MODE for [QUIT].)