

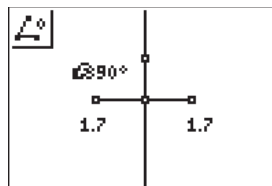
# Perpendicular Bisector of a Line Segment

Approximate  
Total Time:  
20 minutes

## ACTIVITY OVERVIEW:

### In this activity we will

- Draw a segment
- Draw its perpendicular bisector
- Measure the two halves of the segment
- Measure an angle formed
- Change the length and position of the segment



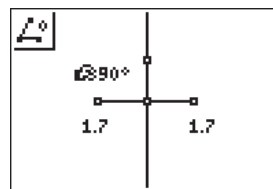
After drawing a segment and its perpendicular bisector, we are able to observe right angles and congruent segments. In addition, we can see that changing the length or orientation of the segment will also change the perpendicular bisector.

**NCTM Geometry Standard:** Analyze characteristics and properties of 2- and 3-dimensional geometric shapes and develop mathematical arguments about geometric relationships.



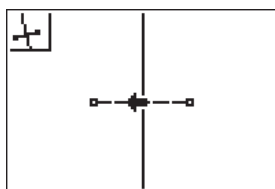
1

Press **[APPS]**. Move down to the Cabri Jr 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.”)



4

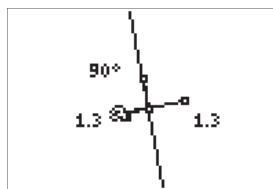
Now you can measure each half of the segment and an angle formed by the intersection of the segment and the perpendicular bisector. The measurement tools are found in the F5 menu.



2

Press **[WINDOW]** for F2 and choose **Segment** to draw a line segment. Move the pencil to the desired location of one endpoint of the segment and press **[ENTER]**. Move to the location of the other endpoint and press **[ENTER]**.

Press **[ZOOM]** and move to **Perp. Bis.** then press **[ENTER]**. Move the big arrow until the segment is flashing. Press **[ENTER]** and the perpendicular bisector is drawn.



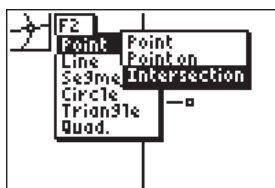
5

Press **[ALPHA]** and grab an endpoint of the segment to change its length and position. You will be able to see the measurements of the segments change as the segment changes length and position. The angle will remain  $90^\circ$ .



### For TI-Navigator™ Users

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



3

Press **[WINDOW]** for F2 and choose **Point** then move right and down to **Intersection** and press **[ENTER]**. Move until both the segment and the perpendicular bisector are both flashing and press **[ENTER]**; the intersection point will be marked.



6

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