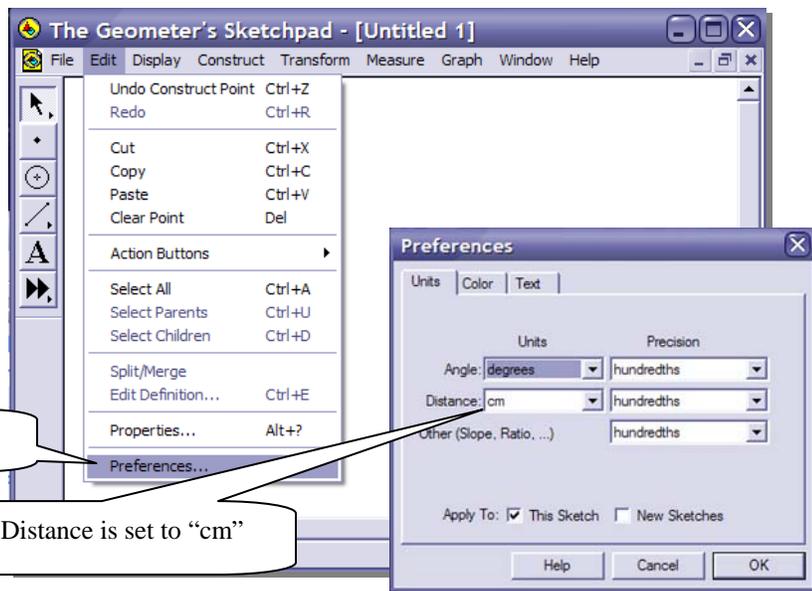
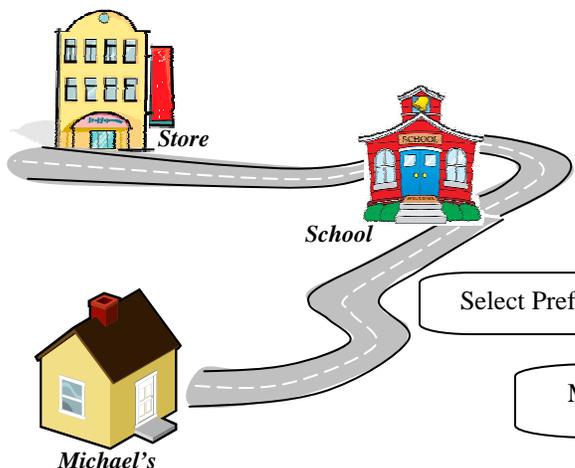


- o Create a sketch that recreates the following problem in sketchpad.

Michael drives to school from his house. He travels 6 miles on the trip. His friend Janet drives from their school to a department store. She travels 2.5 miles on her trip. At most, how far is the same department store away from Michael's house? What is the closest the department store could be?

- o First, select Preferences... under the Edit menu.

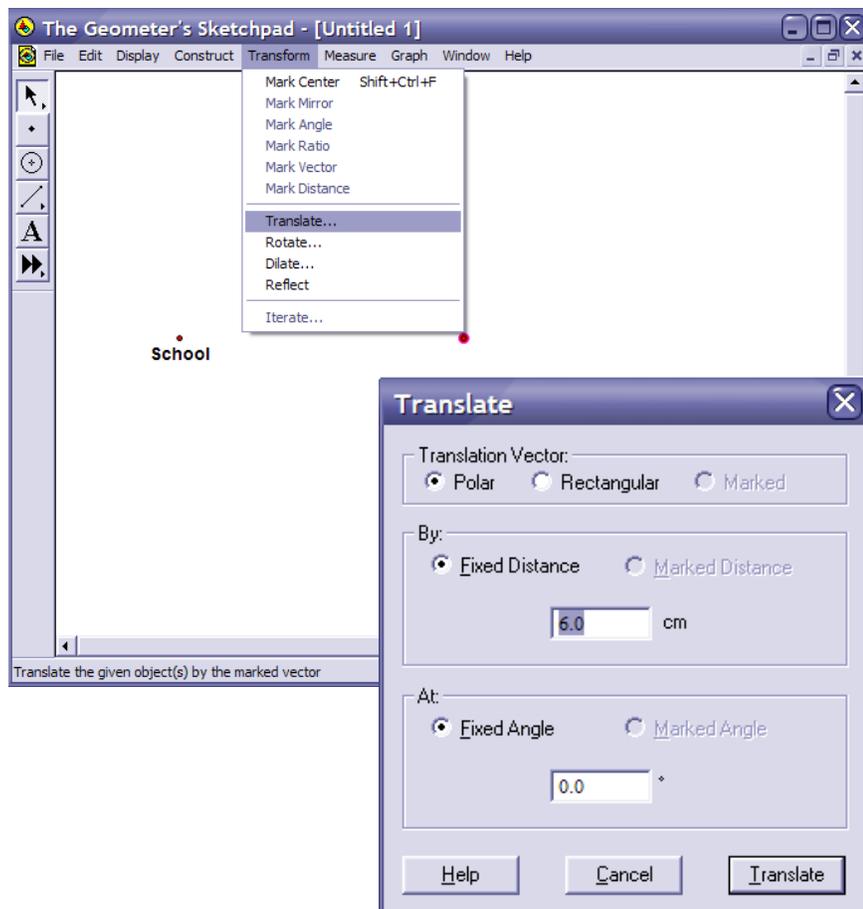
Make sure the Distance unit is set to "cm" and click **OK**.



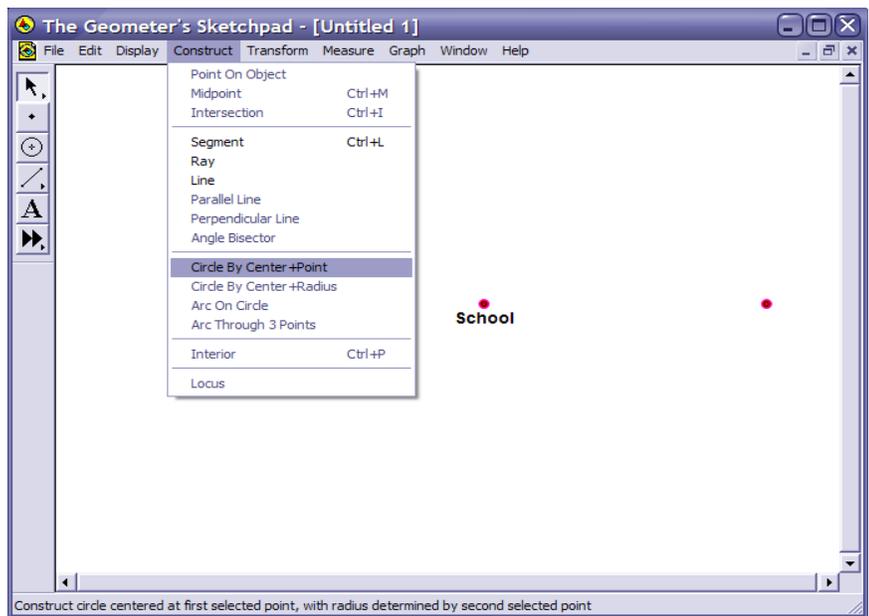
- o Using the point tool, create a point in the center of your sketch that will represent the school. Using the label tool, rename the point "school".

- o Highlight the point that represents the School. Under the **Transform** menu select **Translate...**

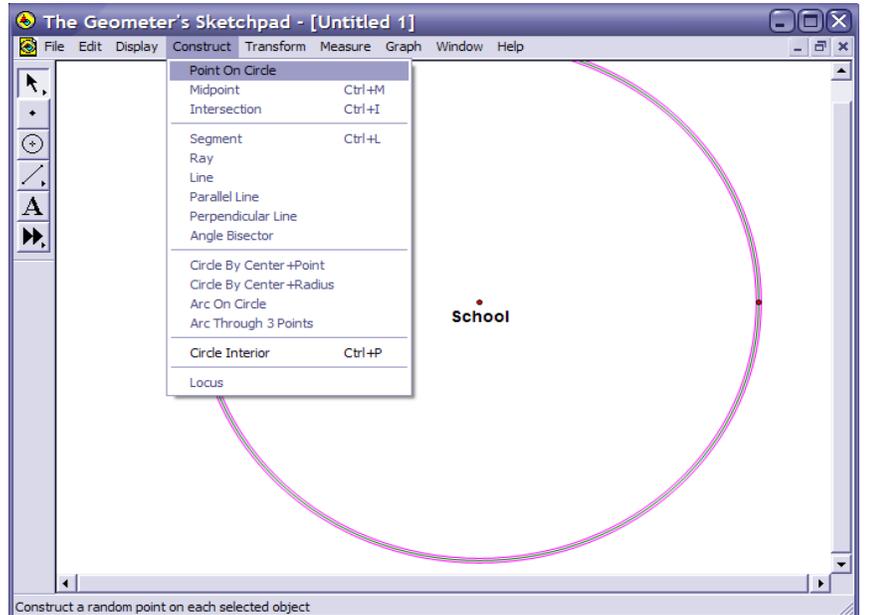
- o Select the "Polar" radio button. Select "Fixed Distance" and change the value to 6.0 cm. Next, select "Fixed Angle" and change the value to 0.0°. Finally, press the **Translate** button.



- o Click in a blank space with the selection tool to deselect everything. Then, click on the point representing the school first followed by the translated point (the order is important). Then, select **Circle By Center & Point** under the **Construct** menu.

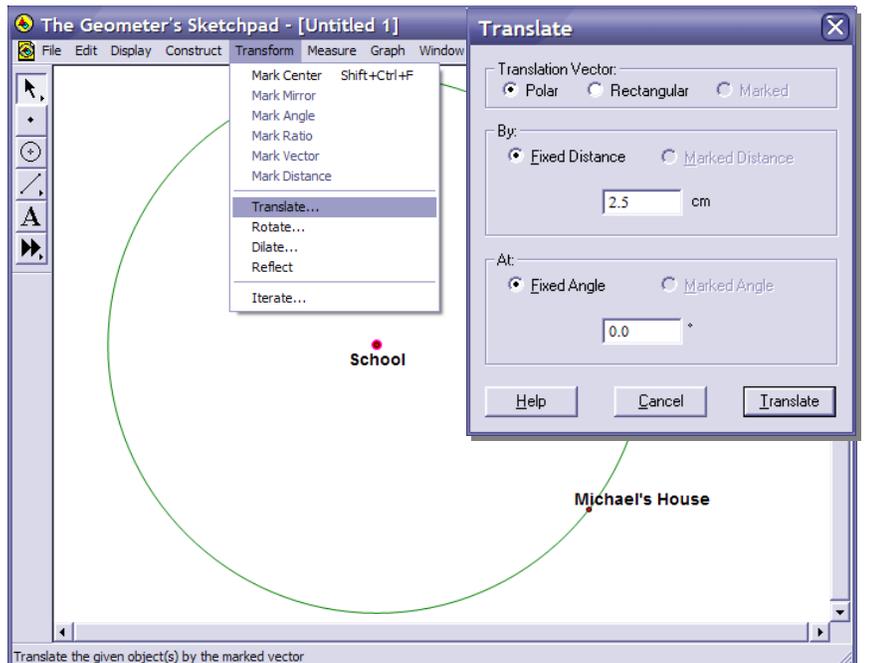


- o With the newly created circle still highlighted select **Point on Circle** under the **Construct** menu. This will create a point somewhere on the circle. Using the label tool, change the name of this point to “Michael’s House”.



- o Highlight the point that represents the School. Under the **Transform** menu select **Translate...**

- o Select the “Polar” radio button. Select “Fixed Distance” and change the value to 2.5 cm. Next, select “Fixed Angle” and change the value to 0.0°. Finally, press the **Translate** button.



- o Click in a blank space with the selection tool to deselect everything. Then, click on the point representing the school first followed by the translated point (the order is important). Then, select **Circle By Center & Point** under the **Construct** menu.

- With the newly created circle still highlighted select **Point on Circle** under the **Construct** menu. This will create a point somewhere on the circle. Using the label tool, change the name of this point to “Store”.

- Click in a blank space with the selection tool to deselect everything. Then, click on the point representing the school, the store, and Michael’s house. After all three points are highlighted, select **Segments** under the **Construct** menu.

- With the newly created segments still highlighted, select **Length** under the **Measure** menu.

- Using the selection tool, drag the points and try to determine the maximum and minimum distances from Michael’s house to the School.

What happens with the three points when the distance is at a minimum?

at a maximum?

