

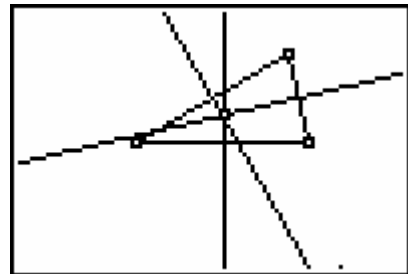


CABRI™ JR. ACTIVITY 9: EXPLORING THE *CIRCUMCENTER* OF A TRIANGLE

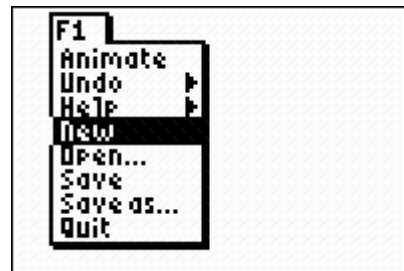
ACTIVITY OVERVIEW:

In this activity we will

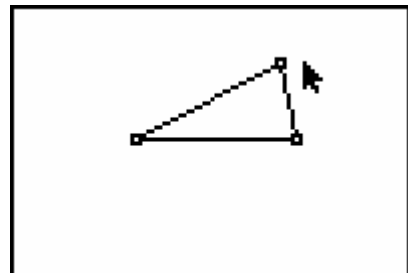
- Draw a triangle
- Draw the perpendicular bisector of each side
- Locate the *circumcenter*
- Explore properties of the *circumcenter*



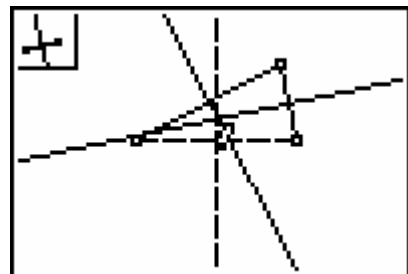
Press **[APPS]**. Move down to the CabriJr APP and press **[ENTER]**. Press **[Y=]** for the F1 menu and select **New**. (If asked to **Save changes?** press **[↩]** **[ENTER]** to choose “No.”)



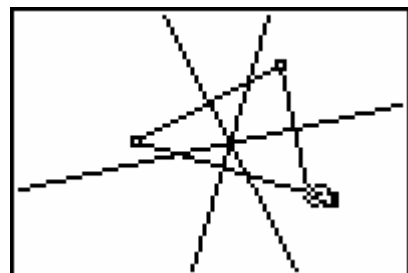
Press **[WINDOW]** for the F2 menu, move down to **Triangle** and press **[ENTER]**. Move to the location of a vertex and press **[ENTER]**. Move to the second vertex and press **[ENTER]**. Move to the third vertex and press **[ENTER]**. Press **[CLEAR]** to exit the triangle drawing tool.



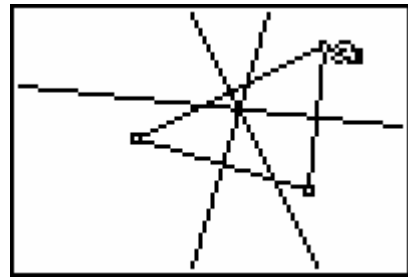
Press **[ZOOM]** for the F3 menu and move down to **Perp. Bis.** and press **[ENTER]**. Move the arrow until one side of the triangle is selected (flashing) and press **[ENTER]**. The **Perp. Bis.** tool is still active, so move to another side of the triangle and press **[ENTER]** when the side is flashing. Repeat for the third side of the triangle. Press **[CLEAR]** to exit the **Perp. Bis.** drawing tool



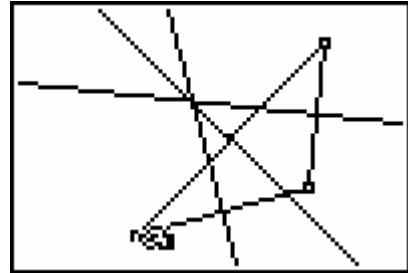
What appears to be true about the intersection of the perpendicular bisectors of the sides of the triangle? (They appear to intersect at a common point.)
Move to a vertex of the triangle, press **[ALPHA]** to activate the *hand* and move the vertex to a new location.



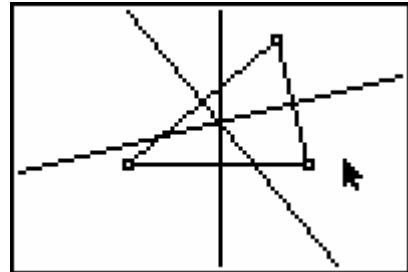
Press **[CLEAR]** to deactivate the *hand* and move to a different vertex of the triangle. Press **[ALPHA]** and move the point at this vertex.
 What appears to be true about the intersection of the perpendicular bisectors of the sides of the triangle?



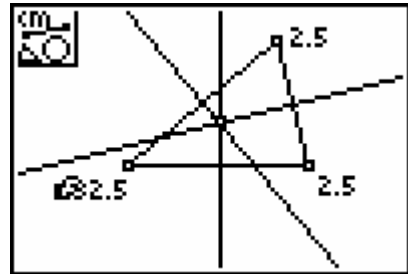
Press **[CLEAR]** to deactivate the *hand* and move to a different vertex of the triangle. Press **[ALPHA]** and move the third point defining the triangle.
 What appears to be true about the intersection of the perpendicular bisectors of the sides of the triangle?



The perpendicular bisectors of the sides of the triangle intersect at a common point. This point is called the *circumcenter* of the triangle.
 What is true about the *circumcenter* of an acute triangle? an obtuse triangle? a right triangle?



Extension: Use the measurement tool in F5 to find the distance from the *circumcenter* to each vertex.



Exit the APP using F1 and selecting Quit, or by pressing **[2nd] [MODE]** for **[QUIT]**.

