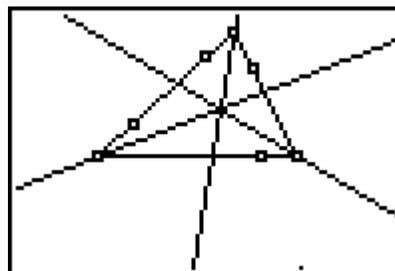


CABRI™ JR. ACTIVITY 8: EXPLORING THE *INCENTER* OF A TRIANGLE

ACTIVITY OVERVIEW:

In this activity we will

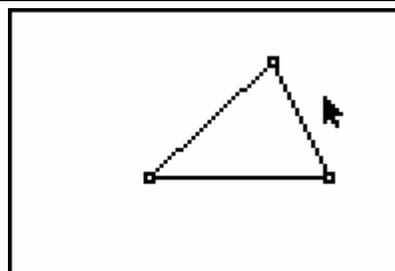
- Draw a triangle
- Draw the bisector of each angle of the triangle
- Locate the *incenter*
- Explore properties of the *incenter*



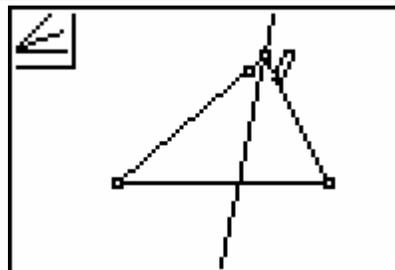
Press **[APPS]**. Move down to the CabriJr APP and press **[ENTER]**. Press **[Y=]** for the F1 menu and select **New**. (If asked to **Save changes?** press **[↩]** **[ENTER]** to choose “No.”)



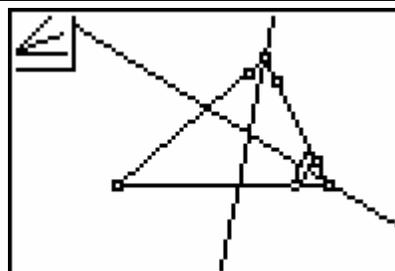
Press **[WINDOW]** for F2, move down to **Triangle** and press **[ENTER]**. Move to the location of a vertex and press **[ENTER]**. Move to the second vertex and press **[ENTER]**. Move to the third vertex and press **[ENTER]**. Press **[CLEAR]** to exit the triangle drawing tool.



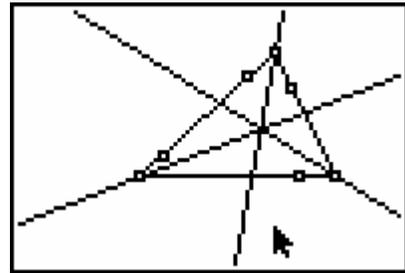
Press **[ZOOM]** for the F3 menu, move to **Angle Bis.**, and press **[ENTER]**. Move the pencil until one side of the triangle is flashing then press **[ENTER]**. This marks a point on the side of the triangle. Move until the vertex point flashes and press **[ENTER]**. Move until the other side forming the angle is flashing and press **[ENTER]** again. You have used 3 points to identify angle and the angle bisector has been drawn.



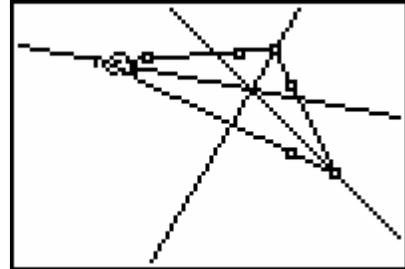
With the **Angle Bis.** tool still active, press **[ENTER]** to select that point again OR move to another point on the side of the triangle and press **[ENTER]**. Move to the next vertex point and press **[ENTER]**, then move to point on the other side forming the angle and press **[ENTER]**.



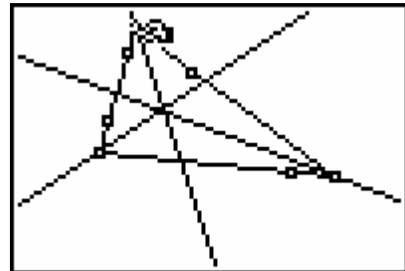
With the **Angle Bis.** tool still active, press **[ENTER]** to select that point again OR move to another point on the side of the triangle and press **[ENTER]**. Move to the remaining vertex point and press **[ENTER]**, then move to point on the other side forming the angle and press **[ENTER]**. Press **[CLEAR]** to exit the **Angle Bis.** tool.



What appears to be true about the intersection of the bisectors of the angles 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.



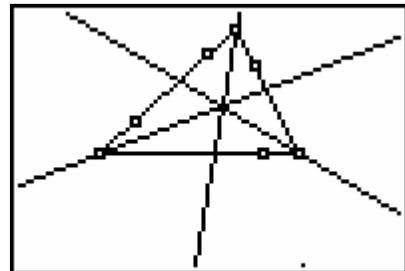
Press **[CLEAR]** to deactivate the *hand* and move to a different vertex of the triangle. Press **[ALPHA]** and move the point at this vertex.
 What appears to be true about the intersection of the bisectors of the angles of the triangle?



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 bisectors of the angles of the triangle?



The bisectors of the angles of the triangle intersect at a common point. This point is called the *incenter* of the triangle.



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

