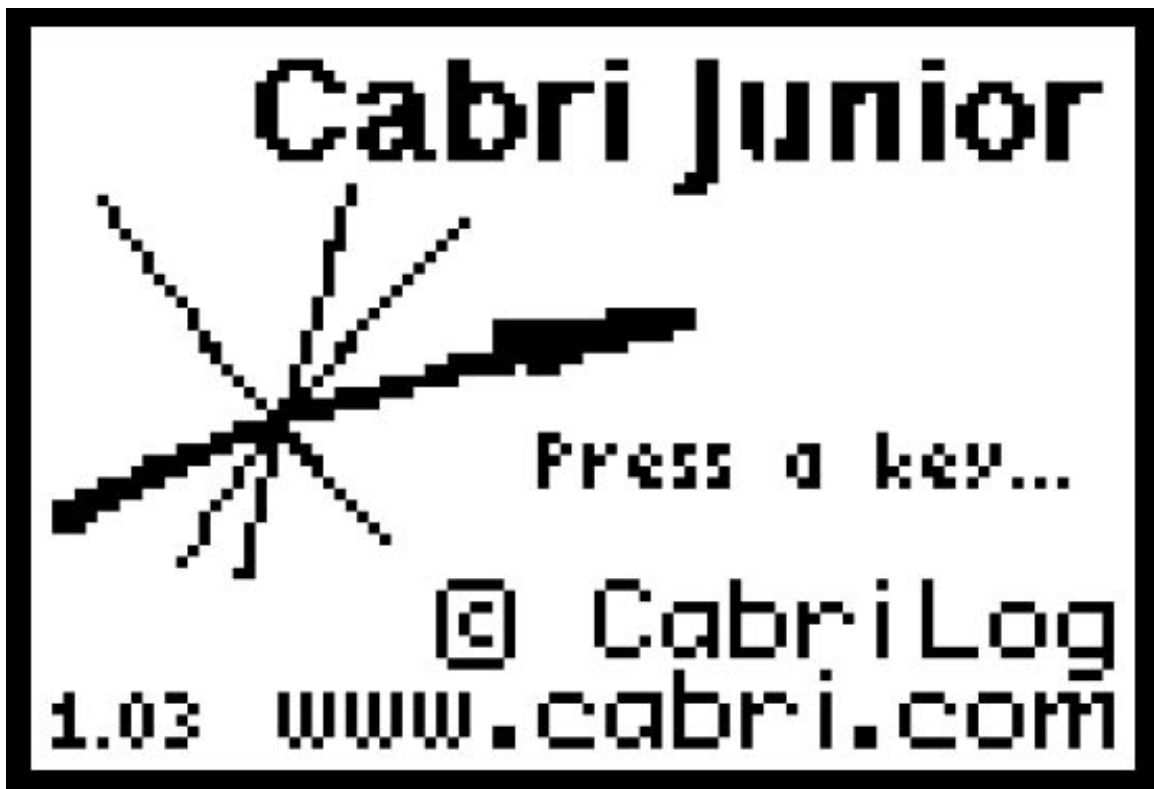


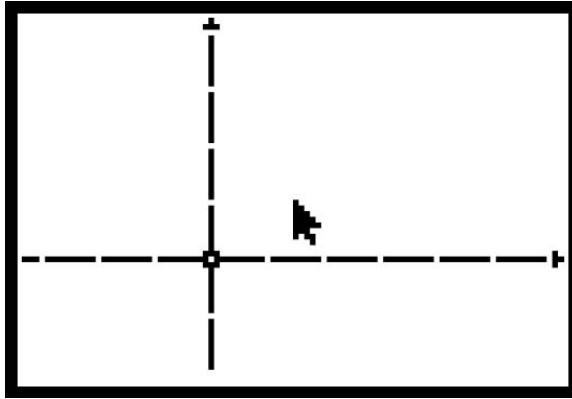
Coordinate Geometry

Circles

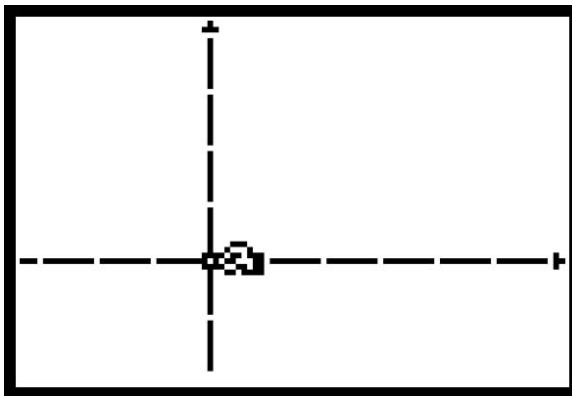
A Sixty-Minute Presentation



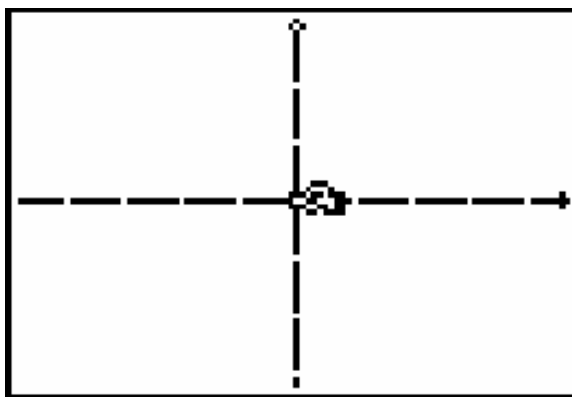
- Open Cabri® Jr.
- If the axes are not shown on your screen, select **Hide/Show (F5)**, display the submenu, select **Axis** and press **ENTER**.



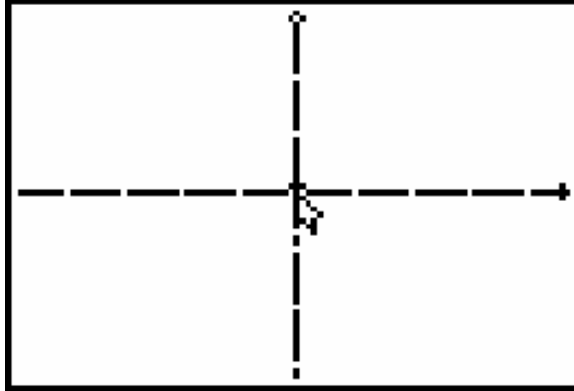
- Move the cursor and select the origin, press **ALPHA** to attach the hand.



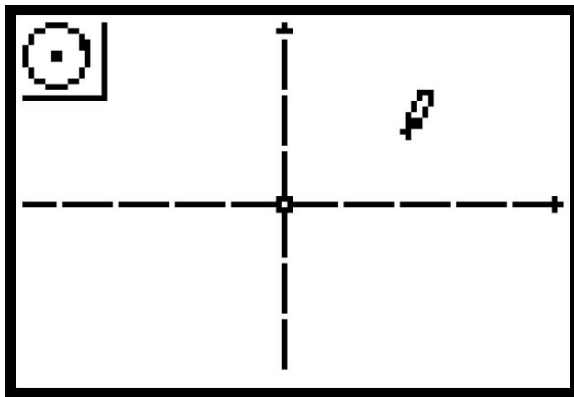
- Move the y-axis to the center of the screen using the right arrow.
- Move the x-axis to the center of the screen using the up arrow.



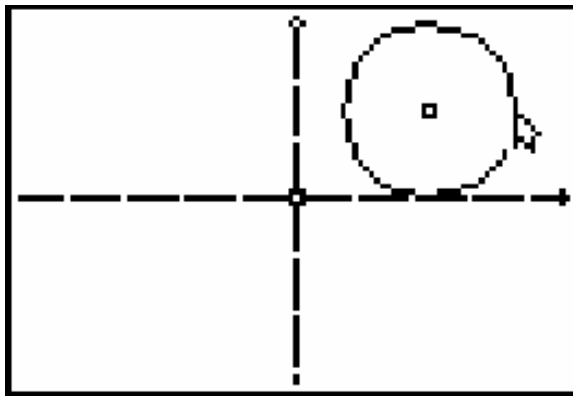
- Press **CLEAR** to disengage the hand.



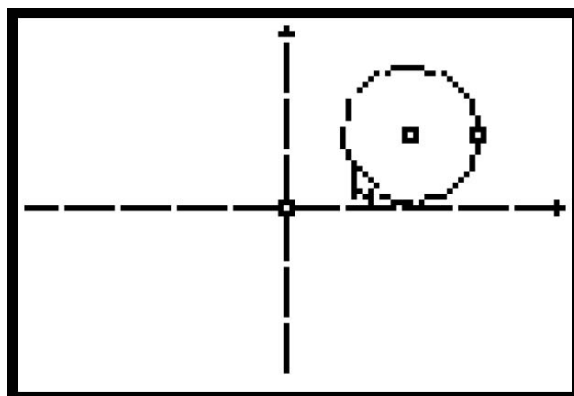
- Select the **Circle** tool (F2) and move the cursor near the middle of quadrant I.



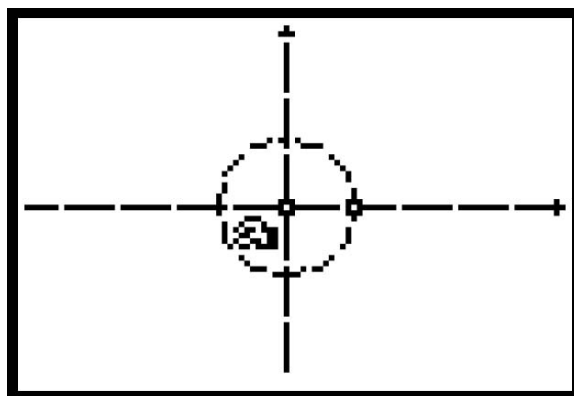
- Press **ENTER** to create the circle's center, use the right arrow to draw a circle in the quadrant, press **ENTER** to fix the circle's radius.
- Press **CLEAR** to disengage the **Circle** tool.
-



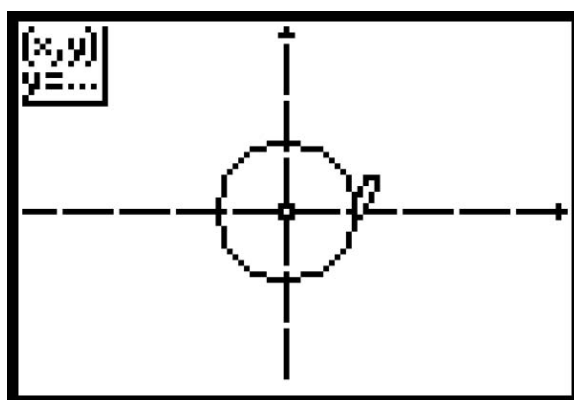
- Move the cursor to another part of the circle so the circle is selected, but the point defining its radius is not selected.



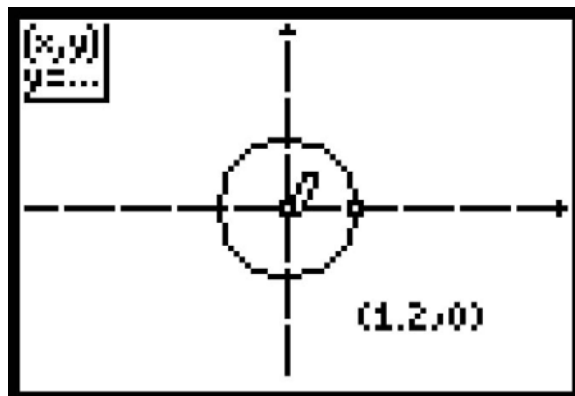
- Press **ALPHA** to grab the circle and use arrows to move the circle so the center is at the origin.



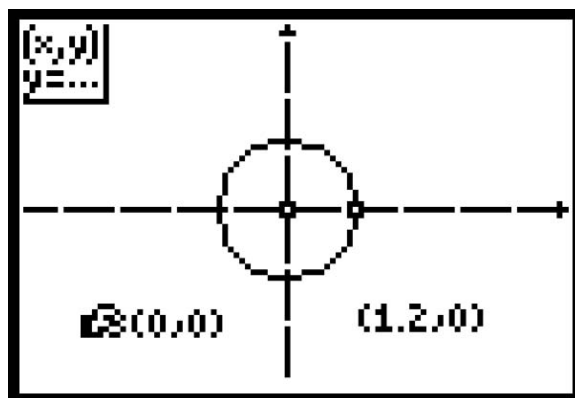
- Press **ENTER** to disengage the dragging hand.
- Select **Coord. & Eq. (F5)** and move the cursor to the point on the intersection of the circle and the x -axis in quadrant I.



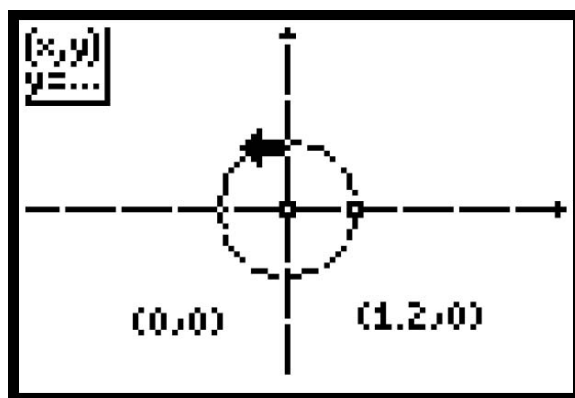
- Press **ENTER**, the point's coordinates will appear with the hand.
- Move the coordinates to quadrant IV and press **CLEAR** to position the coordinates.
- Move the cursor to the origin.



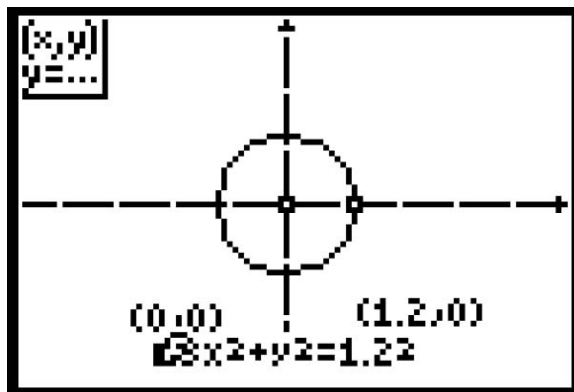
- Press **ENTER** to display the coordinates of the origin and move them to quadrant III.



- Press **CLEAR** to disengage the hand.
- Move the cursor to select the circle.

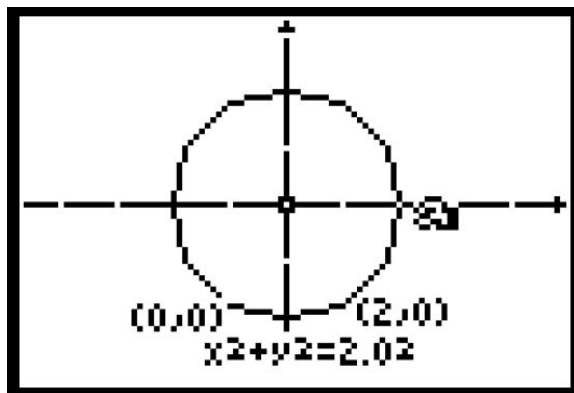


- Press **ENTER**, the equation of the circle will appear attached to the hand.
- Move the equation toward the bottom of the screen,



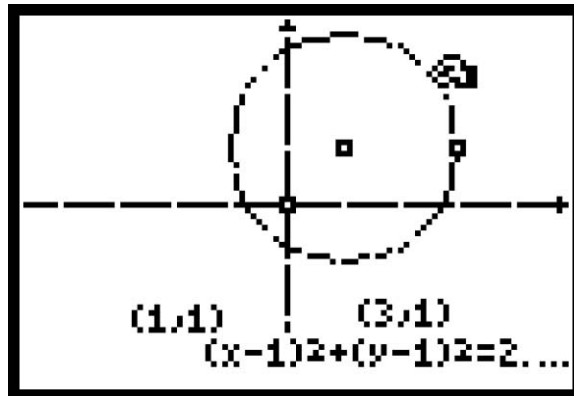
- Press **CLEAR** twice.
- Move the cursor to the point on the circle that is on the x -axis and drag it to the right on the x -axis until the x -coordinate is 2.

Note the change in the equation. Discuss relationships of the x -value of the point, which is the radius of the circle, and the constant shown on the right side of the equation of the circle.



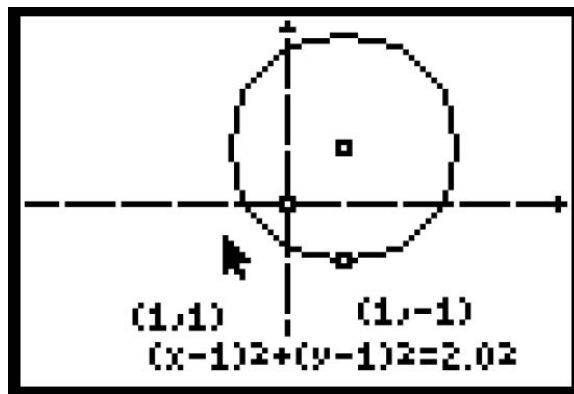
- Press **CLEAR**.
- Move the cursor to a point on the circle in quadrant I, press **ALPHA**, then drag the circle so the center is in quadrant I.

Discuss relationships between the coordinates of the center and the values in the left side of the equation..

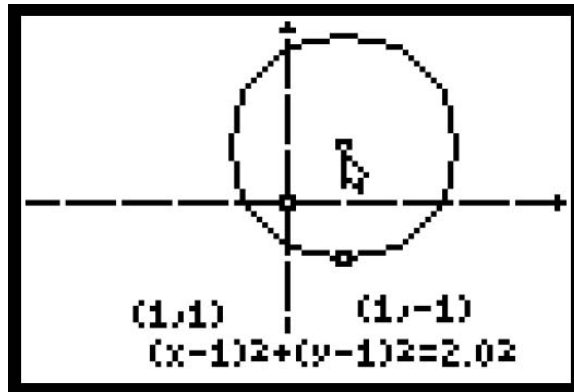


- Press **CLEAR** to disengage the hand.
- Move the cursor to the point on the circle, press **ALPHA**, and move it to quadrant IV.
- Press **CLEAR** to disengage the hand.
- Move the cursor to select the equation, press **ALPHA** and move the equation so you can see all parts of it.
- Press **CLEAR**.

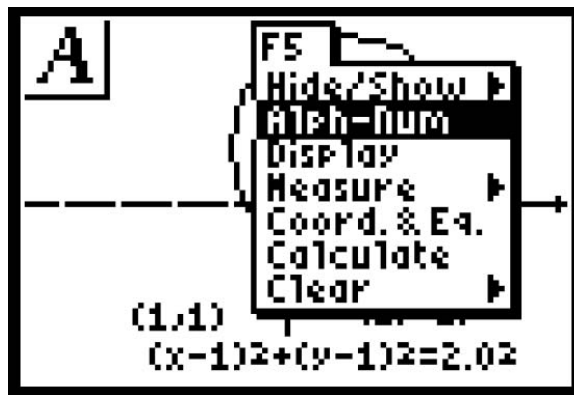
Discuss relationships between the coordinates of the point on the circle and the values in the equation.



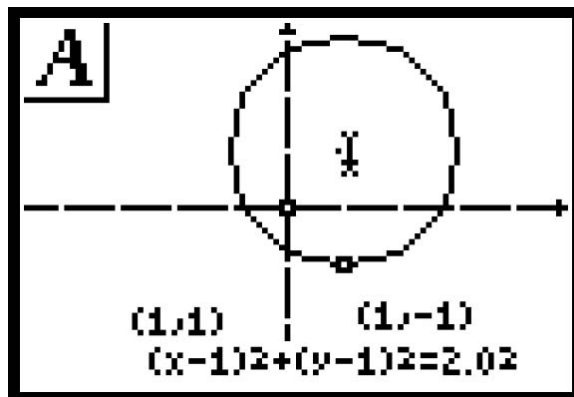
- To label the center of the circle, first move the cursor to the center of the circle. Make sure the center point is blinking.



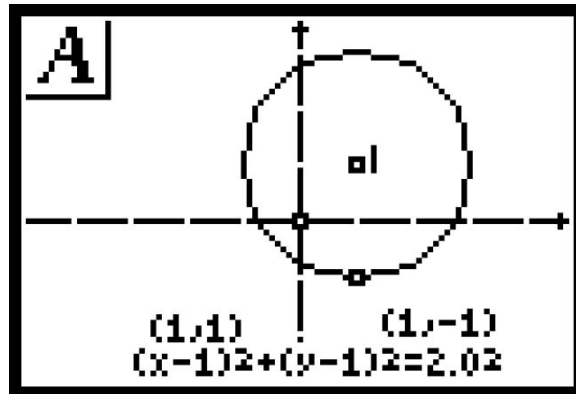
- Select **Alpha-num** (F5).



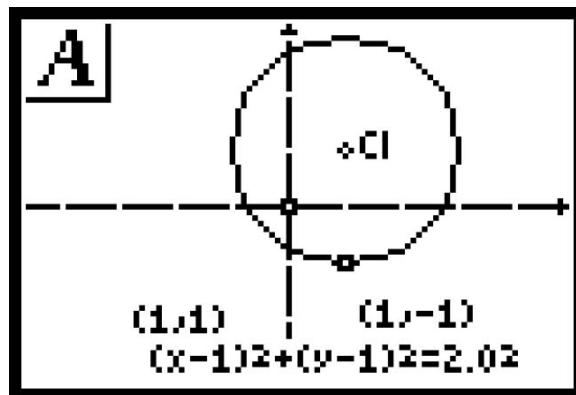
- Press **ENTER**. You will see the **ALPHA** cursor, which looks like an I-bar.



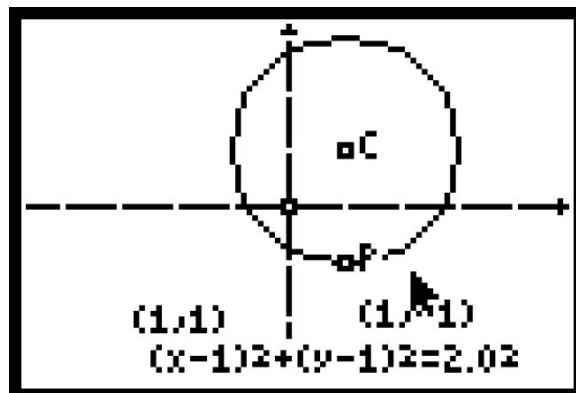
- Press **ENTER** again. You will see a smaller blinking cursor, |.



- Label the point C by pressing **4**.



- Press **CLEAR**.
- Move the cursor to the point on the circle. Follow the previous steps to label the point P.



- Move the cursor to the coordinates of the center and place a **C** to the left of the coordinates.
- Move the cursor the coordinates of the point on the circle and place a **P** to the left of the coordinates.

