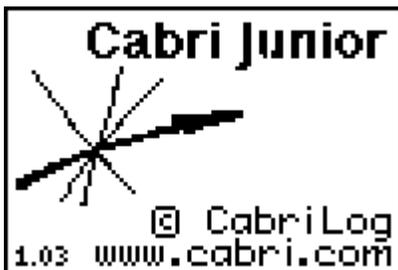


Copying an Angle

Let us try some basic triangle constructions to help us get familiar with Cabri Jr.

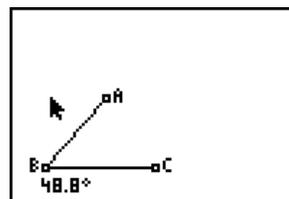
First, turn on your TI-84 and press the APPS key. Arrow down until you see Cabri Jr and press **ENTER**. You should now see this introduction screen.



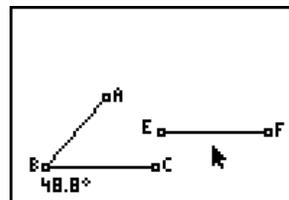
To begin the program, press any key. If a drawing comes up on the screen, press the **Y=** key (note the F1 above and to the right of the key – this program uses F1, F2, F3, F4, F5 names instead of the regular key names) and arrow down to NEW. It will ask you if you would like to save the changes. Press the **2nd** key and then enter to not save the changes.

We are now ready to begin.

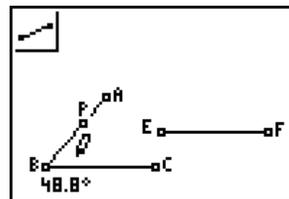
Use the segment tool to create two line segments which form an angle. Label the points A, B and C, and measure the angle. Since this construction has a number of details, you might choose not to label points on your diagram.



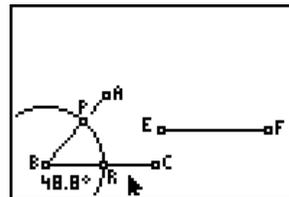
Off to the side, create another line segment. Label the endpoints E and F.



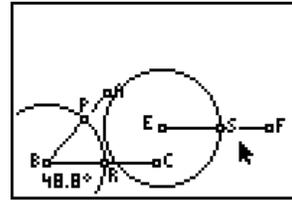
Construct point P on line segment AB. Construct a new line segment joining P to B.



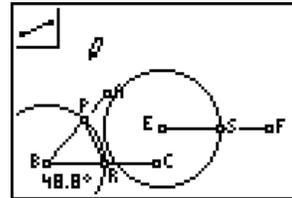
Press **[F3]** and choose the Compass tool. Select point B and line segment PB. This will draw a circle with center at point B that passes through point P. Construct the intersection of this circle and line segment BC. Label this point R. Points P and R are now the same distance from point B.



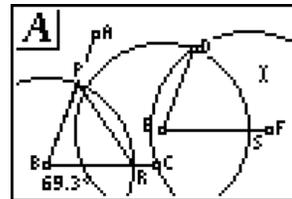
Use the compass tool again to construct a new circle by selecting point E and line segment PB. This will create another circle with center at point E and radius equal to the first circle. Construct the intersection point of the new circle and line segment EF. Label this point S. Point S is now the same distance from point E as points P and R from B.



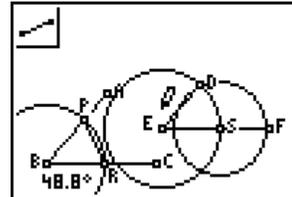
Construct a line segment joining points P to R.



Construct a third circle using the compass tool. Select point S as the center and line segment PR as the radius. Construct the intersection of the two circles. Note: There are two points of intersection, one above EF and a second below EF. Label the point above the segment D.



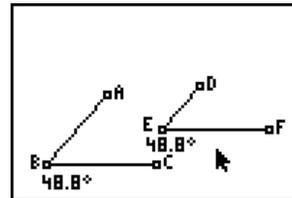
Due to the way in which we have constructed the points, D is the same distance from E as P is from B and D is the same distance from S and P is from R. Construct the line segment joining point D to E.



Press [F5] and select the Hide/Show tool. Use this tool to hide the circles, line segment PR, the extra points P, R, S and the second point of intersection of the two circles and their labels.

Measure angle DEF. It should be the same as angle ABC. To increase the accuracy of the measurement, press [CLEAR] and

move to the measurement. Press the [+] key. You can increase the accuracy up to the nearest hundredth.



If there are any active icons, press [CLEAR]. Move to point A and press the [ALPHA] key to grab point. This will allow you to drag the point. The degree measurement of the angles should change yet remain equal. Why do these angles remain equal? Will they ever be different?

