




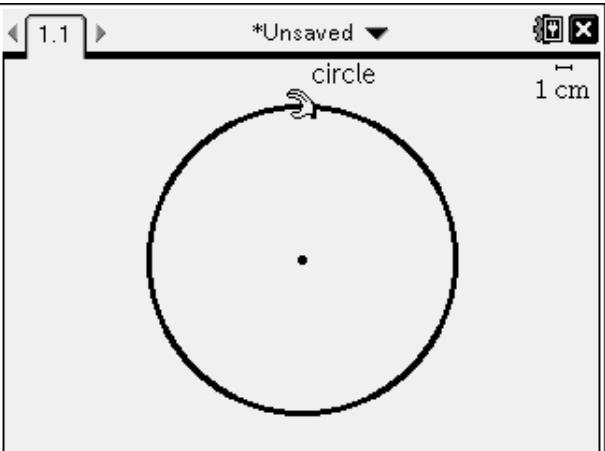





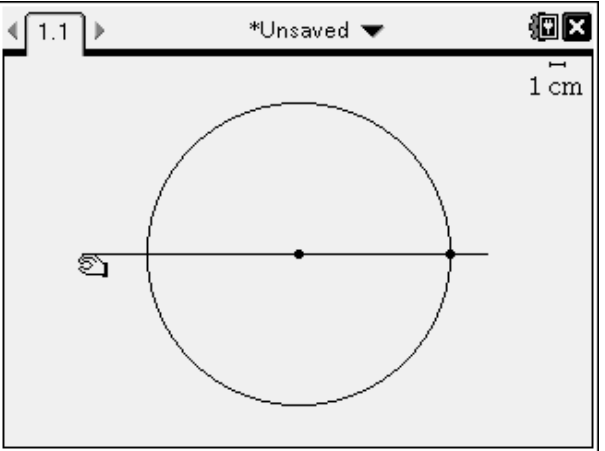



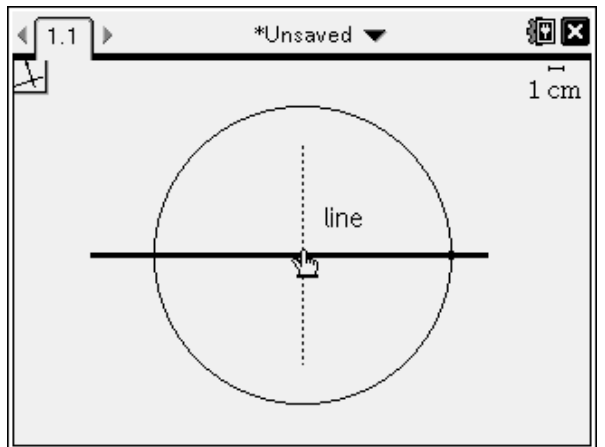


## Constructing a Pentagon

TI-Nspire OS 2.0.0.1188

<p> 1: New Doc            Save (previous document) is your option   3: Add Geometry   9: Shapes   1: Circle  <i>Click in center of screen (origin)</i>  <i>Move cursor near edge and click.</i>  </p>	
<p><i>Construct a line through center of circle</i>   7: Points &amp; Lines            4: Line  <i>Click on the origin of circle, move to outer edge and click second time.</i>   Move cursor to opposite end of line and grab, Hold the  in the center of touchpad (clickpad) until hand on screen closes  then extend line through opposite side of circle.  </p>	
<p><i>Construct a perpendicular line though the center of the circle.</i>   A: Construction            1: Perpendicular  <i>Move cursor to origin</i>               Using procedure in previous frame, grab and extend line through circle (both ends.)</p>	

*Find the center of the left radius*

**(menu)**

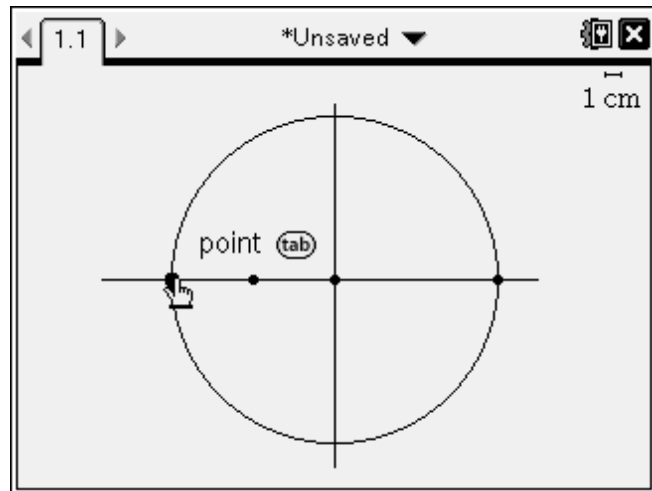
A: Construction

5: Midpoint

*Click on the origin*

*Click on the intersection of the line and circle*

**(esc)**



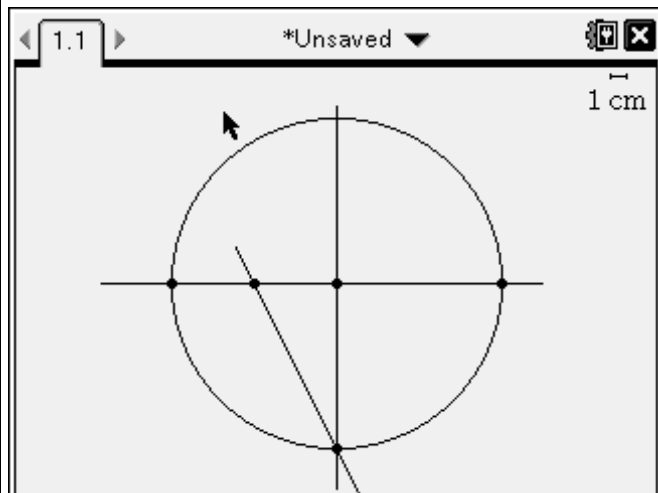
*Draw a line from the intersection of the line and circle (bottom) through midpoint.*

**(menu)**

7: Points & Lines

4: Line

Click on intersection, then midpoint



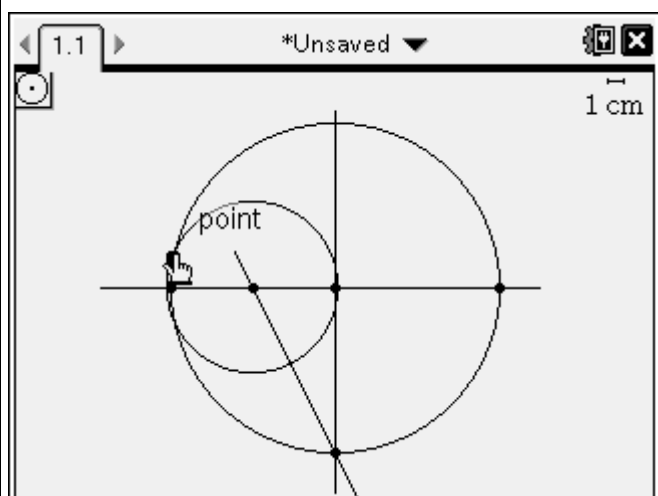
*Make a circle with the origin at the midpoint and the edge at the origin of first circle.*

**(menu)**

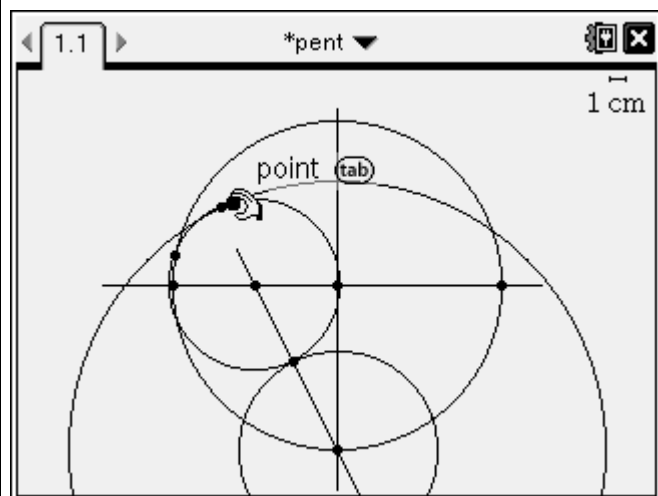
9: Shapes

1: Circle

Click at the midpoint, then at origin



Construct a circle with origin at the intersection of the two lines at the bottom of screen with the edge at the close side of small circle.



Hide the upper small circle & diagonal line

(menu)

1: Actions

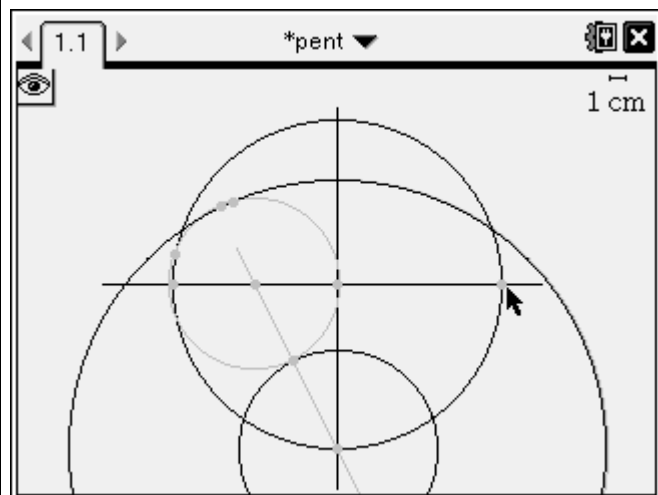
3: Hide/Show

Click on small upper circle

Click on diagonal line

Click on each point

(esc)



Draw the line segments to form the pentagon

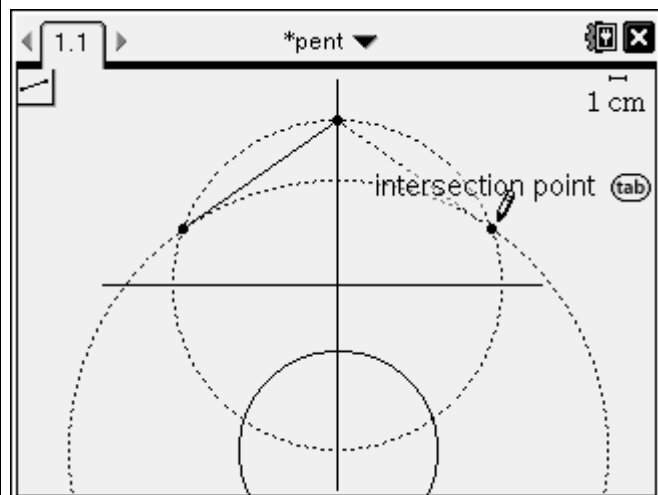
(menu)

7: Points & Lines

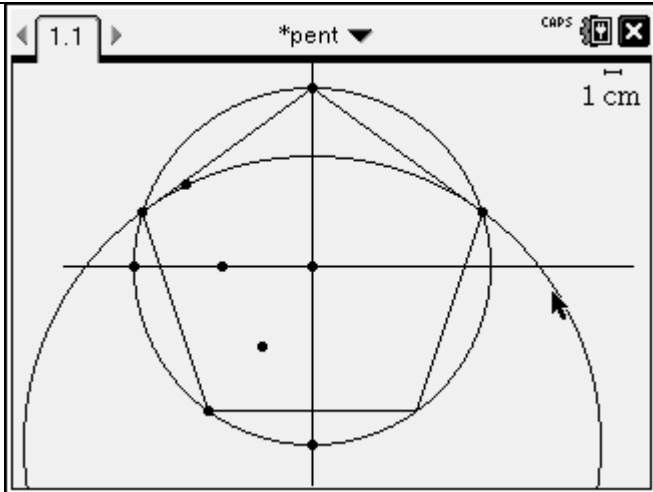
5: Segments

Click once (left intersection of two largest circles) to indicate beginning of segment, move to upper intersection of original circle and vertical line to indicate end of segment.

Click again to indicate beginning of next segment, move to right intersection of two large circles for end.

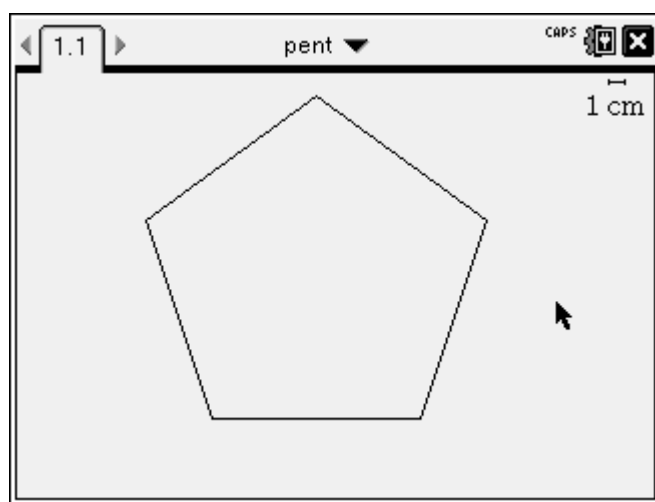


Continue around circle until all the circle intersections have been connected to form pentagon.



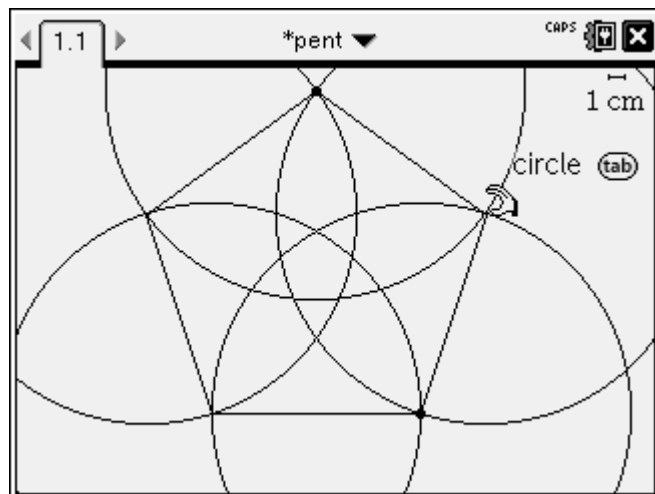
menu

1: Actions  
3: Hide/Show  
Click on each line, circle, and point.  
The result is a pentagon



To verify all sides are equal:

Construct circles from each vertex with edge at adjoining vertex to prove the sides are all equal



To verify all angles are equal.

(menu)

8: Measurement

4: Angle

Click on one side of pentagon (Point On),

Click on vertex ("Intersection Point),

Click on adjacent side (Point On).

Repeat process for each angle.

{NOTE: With cursor on angle measurement;

Press  $\left[ \begin{smallmatrix} + \\ \square \end{smallmatrix} \right]$  to increase number of digits displayed

or  $\left[ \begin{smallmatrix} - \\ \square \end{smallmatrix} \right]$  to decrease number. }

