How to Do Page 536 #C4 Using *GeoGebra*

1. Create a circle with its centre at the origin.

    • Click on the Circle with Center Through Point icon .

    • Click at the origin. Then, click again along the *x*-axis to create a circle of the desired size. You will see Figure 1.
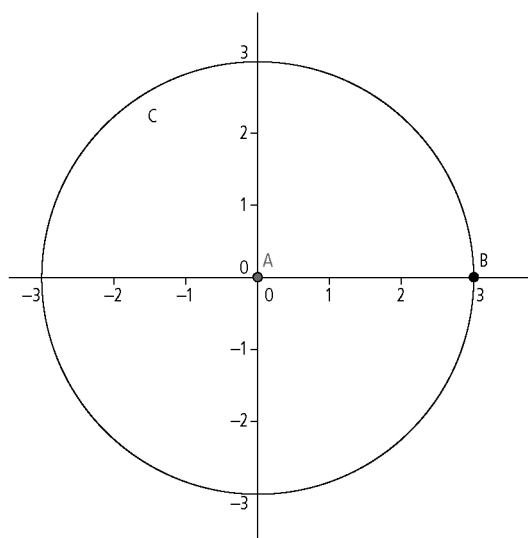
Figure 1

(Note: If the axes are not displayed, click on View and then select Axes.)

2. Create points along the circle every 45°.

    • Click on the small arrow in the Reflect About Line icon to open the menu. Choose Rotate Object around Point by Angle .

    • Click on the point that is on the circle. Then, click on the origin and enter **45**, as shown in Figure 2.
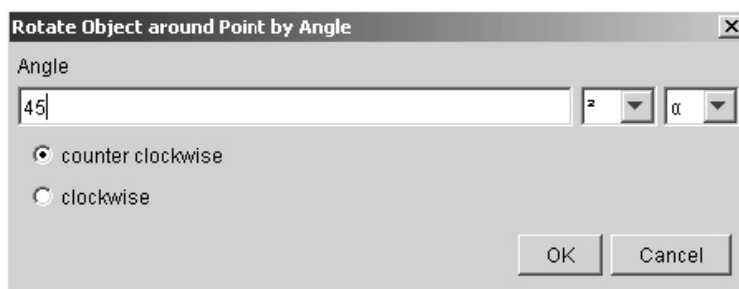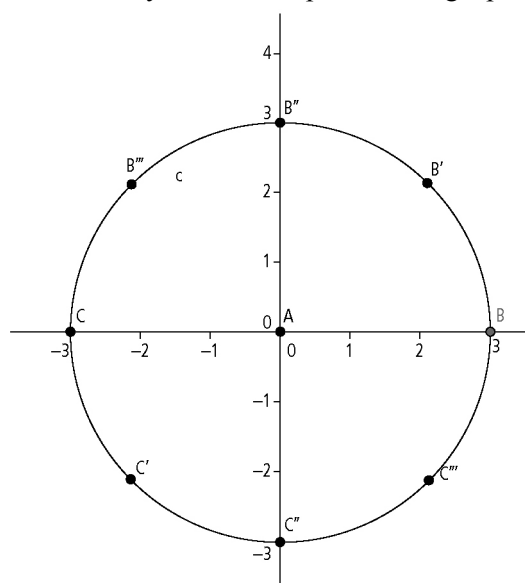
Figure 2

    • The Rotate icon should still be highlighted. Click on the recently transformed point (at 45°) and then the origin. Then, rotate 45°.

- Continue rotating the most recently transformed point until eight points are on the circle. See Figure 3.
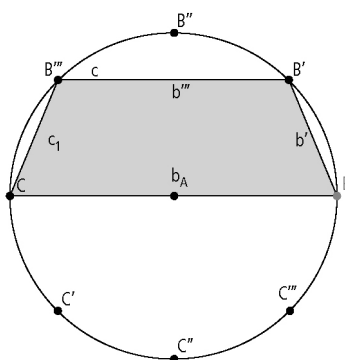

Figure 3

(Note: If you wish to hide the axes, click on View and select Axes.)

3. Construct quadrilaterals.

Method A: Use the Polygon Tool

- Click on the polygon tool [icon].
- Either clockwise or counterclockwise, click on the four vertices of the quadrilateral you wish to construct and then click again on the first vertex selected (to close the polygon). See Figure 4.
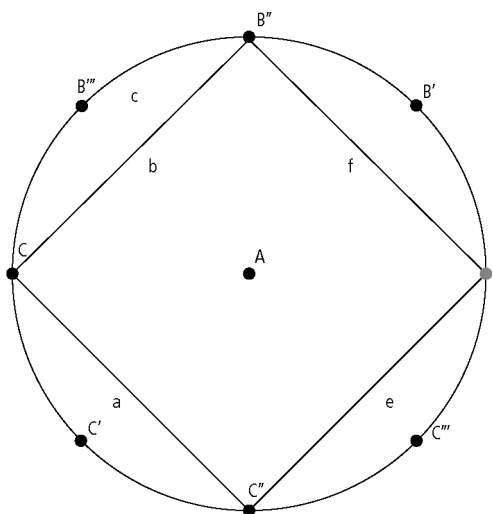
(Note: To remove a polygon, click on it and then press delete.)

Figure 4

Method B: Create Segments Between Points

- Click on the small arrow in the Line Through Two Points icon ⬚ to open the menu.

- Choose Segment between Two Points ⬚. Click on two points you wish to connect with a segment.

- The Segment icon should still be highlighted. Continue constructing segments by clicking its two endpoints, until the quadrilateral is formed as in Figure 5.

(Note: To remove a quadrilateral, click on one of its segments and press delete. Continue deleting segments until the quadrilateral has been removed.)

Figure 5

(Note: If you wish to compare the lengths of two segments, click on the small arrow in the Angle icon ⬚ to open the menu. Choose Distance or Length ⬚. Click on each segment that is to be measured.)